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A Cash Plus Model for Safe Transitions to a Healthy and Productive Adulthood: Round 4 Impact Evaluation Report

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Acronyms

AIDS	acquired immunodeficiency syndrome
ARV	antiretroviral
ATT	Average Treatment effect on the Treated
CCT	conditional cash transfer
CES-D	Center for Epidemiological Studies Depression Scale
COSTECH	Tanzania Commission for Science and Technology
cRCT	cluster randomized controlled trial
CT-OVC	Cash Transfer for Orphans and Vulnerable Children
DD	Difference in Differences
DFID	Department for International Development (United Kingdom)
DHS	Demographic and Health Surveys
FCDO	Foreign, Commonwealth and Development Office (United Kingdom)
FCS	Food Consumption Score
GBV	gender-based violence
GEM	Gender-Equitable Men
GRASSP	Gender-responsive and age-sensitive social protection
HIV	human immunodeficiency virus
ILO	International Labour Organization
IPV	intimate-partner violence
ITT	Intention To Treat
MoHCDEC	Ministry of Health, Community Development, Gender, Elderly and Children
MSPSS	Multidimensional Scale of Perceived Social Support
NBS	National Bureau of Statistics
NGO	non-governmental organization
PAA	project area authority
PMT	proxy means test
PSSN	Productive Social Safety Net
PWP	public works programme
RCT	randomized controlled trial
REPOA	Researh on Poverty Alleviation
SCTP	Social Cash Transfer Programme
SDGs	Sustainable Development Goals
SRH	sexual and reproductive health
SSA	Sub-Saharan Africa
STI	sexually transmitted infection
TACAIDS	Tanzania Commission for AIDS
TASAF	Tanzania Social Action Fund
TDHS	Tanzania Demographic and Health Survey
ToT	training of trainers
TZS	Tanzanian Shilling
UCT	unconditional cash transfer
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
US$	United States Dollar
USAID	United States Agency for International Development
VACS	Violence Against Children Survey
WHO	World Health Organization

Glossary of key terms

Analysis of covariance (ANCOVA): an econometric model that evaluates whether the means of a dependent variable (DV) (the outcome) are equal across levels of a categorical independent variable (IV) (often called a treatment), while statistically controlling for the effects of other continuous variables that are not of primary interest, known as covariates (CV).

Attrition: occurs when individuals interviewed at baseline are not found (and so are not interviewed) at follow-up.

Average Treatment Effects on the Treated (ATT): the effects of an intervention on those receiving the intervention (i.e., those participating in the policy or programme).

Baseline balance: This is verified when outcomes are similar at baseline in both treatment and control groups. It allows us to conclude that differences observed at follow-up regarding that same outcome are attributable to the intervention rather than to systematic differences that already existed at baseline between treatment and control groups.

Cash plus: refers to social protection programmes that combine cash transfers with 'plus' initiatives that link beneficiaries to other services and interventions. Such complementary interventions may include access to services (health, education, social services), livelihood-strengthening interventions or behaviour change communication (BCC) on topics such as family planning, HIV, nutrition, hygiene and sanitation.

Cluster randomized controlled trial (cRCT): study design in which treatment and control groups are randomly assigned at the group (in this case, village) level and not at the individual person level.

Control: the group of adolescents in villages who did not receive the 'plus' intervention. Comparisons between this group and the treatment group are made over time to estimate the impacts of the 'cash-plus' intervention.

Counterfactual: refers to the outcomes in the absence of an intervention or what would have occurred without the intervention.

Differences in differences (DD): an estimation strategy that compares changes in the treatment group between round one (baseline) and round four to changes in the control group over the same period. The control group allows researchers to identify changes that may have occurred due to other factors (e.g., floods, recession, inflation, rapid economic development), thus making it possible to isolate the impacts of the cash-plus intervention.

Differential attrition: occurs when the characteristics of the individuals who are lost to follow-up are different between treatment and control groups. It threatens the internal validity of the study because it can eliminate the baseline balance.

Gender-responsive social protection: refers to social protection that acknowledges gender dynamics and deliberately responds to women's and men's specific needs (through gender-equitable strategies. In these interventions, gender equality is a central outcome of development investments (not just a means to achieve other goals).

Impact evaluation: An impact evaluation relies on rigorous methods to determine the change in outcomes that can be attributed to a specific intervention, such as a project, programme or policy. It provides evidence of what does or does not work by using a comparison between a treated population and a counterfactual.

Intention to treat (ITT): the effects of an intervention on the whole eligible population, without considering programme uptake among the eligible.

Overall attrition: represents the total share of individuals lost from baseline to follow-up, regardless of treatment status. It can lead to less accurate and less representative impact estimates but does not threaten the internal validity of the study (i.e., the ability to attribute differences at follow-up between study arms to the intervention).

Round: refers to a separate data collection effort and may also be referred to as 'wave'. For example, baseline is one round of data collection, and each follow-up is an additional round or wave. These terms are used interchangeably.

Social protection: Social protection comprises the set of policies and programmes aimed at protecting people from poverty, vulnerability and social exclusion throughout their lives, with a particular emphasis on vulnerable groups. Cash transfers are a common tool used under the umbrella of social protection.

Treatment: refers to the intervention itself. Receiving the treatment means participating in the intervention (the cash-plus programme).

Executive summary

This report presents the **round-four findings from the impact evaluation of the Ujana Salama cash-plus model for safe transitions to a healthy and productive adulthood**. This pilot project was implemented between 2018 and 2019, under phase one of the Government of the United Republic of Tanzania's Productive Social Safety Net (PSSN), by the Tanzania Social Action Fund (TASAF) in collaboration with the Tanzania Commission for AIDS (TACAIDS) and with technical assistance from UNICEF. This impact evaluation was a 46-month, mixed-methods study that provides evidence of the potential for an additional 'plus' component that is targeted at youth and which is layered on top of a government cash-transfer programme to improve youth's future economic opportunities and facilitate safe, healthy and productive transitions to adulthood.

The aims of the current report are to examine: (1) whether impacts found at previous rounds were sustained, (2) whether, with more time, adolescents were able to leverage the intervention components to achieve greater impact, (3) the gendered differences in programme impacts, (4) how various implementation characteristics affected gender-equality outcomes and (5) whether contextual factors moderated programme impacts. The impact evaluation included four rounds of data collection – in 2017, 2018, 2019 and 2021. At baseline (2017), participants were 14 to 18 years old. At the time of the round four interviews, they were 18 to 24 years old. This report summarizes findings from the round-four data collection, which was conducted 46 to 48 months after round one (baseline, May–July 2017), 32 months after completion of face-to-face training on livelihoods and life skills, and 21 to 22 months after delivery of productive grant payments, which was the final programme component. Between round two (June–July 2018) and round three (June–August 2019), mentoring and strengthening of adolescent-friendly aspects of health-service provision in study communities was ongoing. Between round three (June–August 2019) and round four (January–March 2021), no intervention activities occurred (*see Section 1.3*).

The Ujana Salama model used an asset-strengthening approach that was informed by a consensus workshop held in the United Republic of Tanzania in February 2016 and which involved government officials, researchers and development partners. The intervention was also informed by findings from a previous impact evaluation that examined how the PSSN affected the well-being of adolescents and youth, and which identified not only several positive impacts but also remaining gaps and vulnerabilities. This model recognizes that cash alone is rarely sufficient to mitigate all the risks and vulnerabilities faced by youth in transitioning from adolescence to safe, healthy and productive adulthood. Many of these risks and barriers are related to education, HIV, early marriage and pregnancy, and economic opportunities. The asset-building framework recognizes that **youth need a combination of social, health and financial assets to safely transition to adulthood**.

The intervention targeted youth in PSSN-beneficiary households and comprised **livelihood and life- skills training, mentoring and an asset transfer, complemented by linkages to strengthened government-run HIV and sexual and reproductive health (SRH) services**. It was designed to enable adolescents to leverage their households' participation in the PSSN, which aims to reduce extreme poverty and break its intergenerational cycle in order to improve well-being today and increase opportunities and capabilities in the future. UNICEF Innocenti, EDI Global and University at Buffalo, in collaboration with TASAF, TACAIDS and UNICEF Tanzania, have implemented the impact evaluation.

This evaluation builds on learning from the Transfer Project, a multi-organization consortium that provides evidence of government-run cash transfers in Africa. This includes a study led by UNICEF Innocenti and Research on Poverty Alleviation (REPOA) (2015–2017) that examined the impacts of the PSSN on youth well-being and the transition to adulthood (Tanzania PSSN Youth Study Evaluation Team, 2018). The evaluation described in this report used a cluster randomized controlled trial (cRCT) design, whereby 130 villages in four project area authorities (PAAs)[1] were randomized into treatment (cash plus) or control (PSSN only) study arms. All eligible adolescents in a treatment village were offered the 'plus' component, which was the same across all households and villages.

The youth study sample consisted of a panel sample of 2,053 (1,064 control and 989 treatment) youth from 1,655 households over four rounds. As part of the quantitative component of the evaluation, information on household and community characteristics was also collected over four rounds. We also conducted 100 health-facility surveys, over six rounds, to gather further contextual information relevant to the intervention and study. Additionally, the qualitative study sample included 32 adolescents who participated in in-depth interviews over four time periods (with replacement sampling). This rigorous mixed-methods impact evaluation estimates the effects of this cash-plus initiative on youth well-being and the transition to adulthood, including outcomes related to: livelihoods, aspirations, schooling, attitudes, violence, partnerships, SRH and care seeking, and HIV knowledge, testing and treatment.

Due to the **multisectoral inputs** of this intervention, there was potential for impact on a broad range of aspects of adolescent well-being, including gender-transformative effects. Therefore, we cast a wide net in terms of the outcomes examined in this evaluation, including economic participation, school attendance, health, violence and other aspects of well-being. We did not expect to see significant programme impacts on all outcomes. We tested the broadest range possible, however, because the programme aimed to address the multifaceted aspects of risk and vulnerability faced by adolescents, as well as how economic vulnerability is closely linked to and mutually reinforces health-related vulnerabilities.

1 The terms 'village' and 'community' are used interchangeably. PAAs are geographical classifications according to TASAF (corresponding to local government authorities in mainland United Republic of Tanzania and Unguja and Pemba district authorities). The four PAAs in our study correspond to the following four district and town councils: Mufindi District Council (DC) and Mafinga Town Council (TC) in Iringa, and Rungwe DC and Busokelo DC in Mbeya.

There are three important factors to consider when interpreting the findings in this report. First, at the time of the round-four evaluation, **intervention activities had not taken place for more than 18 months** (because the intervention ended in 2019, as intended). The current report examines whether impacts could still be seen after the end of the programme. Second, **households experienced a halt in the bimonthly PSSN transfers** between March 2019 and September 2020 (with some households receiving one payment in December 2019 or January 2020). Third, during the period between the end of the intervention (July 2019) and the round-four data collection (January–March 2021), the **COVID-19 pandemic** began, causing a global economic downturn and disruptions in supply chains for health supplies and other commodities. This may have mitigated some of the potential positive benefits of the cash-plus intervention, as households coped with an unexpected loss of regular income.

We have summarized the programme impacts across the three follow-up rounds (*see Table 1*) and note that there were strong, sustained impacts on economic activities, including operating a business and livestock herding. In rounds three and four, there were not only sustained impacts on economic activities but also protective effects against sexual violence and SRH and care seeking. In rounds two and three, there were also protective effects on self-esteem, HIV testing, HIV and contraceptive knowledge, and gender-equitable attitudes, which were not sustained by round four. By round four, however, there were increases in depressive symptoms attributable to the programme. Additionally, in rounds three and four, the programme led to increases in marriage and cohabitation, driven by the male sample. Given the age of the sample by this time (18–23 years old), this is neither an adverse nor protective effect, but it may indicate that better economic opportunities provided by the cash-plus intervention allowed treatment-group males to establish partnerships at higher rates than those in the control group. In this way, outcomes that may have been considered 'adverse', such as pregnancy and marriage in adolescence (coinciding with earlier rounds of data collection), may now be considered normal or even desirable. An unintended impact on school attendance was observed in round three, but this effect was not found in round four (and the highest grade of education completed was not affected across the survey rounds). Overall, despite some results being counter to expectations (increases in depressive symptoms in round four and decreases in school attendance in round three), the programme had positive impacts on economic outcomes, SRH/HIV knowledge, SRH and care seeking, gender attitudes and experiences of violence in one or more rounds. Sexual behaviours were largely unaffected.

Table 1. Summary of programme impacts across rounds on selected indicators

DOMAIN	INDICATOR	ROUND TWO	ROUND THREE	ROUND FOUR
Education and livelihoods	Participation in any economic activities during the week before the interview	↑↑		↑
	Has business in operation	Not measured	↑↑↑	↑↑
	Livestock herding	↑↑↑	↑↑	↑↑
	Participation in any household chores during the day before the interview			
	Attends school		↓↓	
Mental health and attitudes	Self-esteem or locus of control§		↑↑	
	Depressive symptoms		↓↓↓	↑
Health seeking and knowledge	HIV knowledge	↑↑	↑↑	
	HIV testing		↑↑	
	Contraceptive knowledge	↑↑	↑↑	
	Contraceptive use			
	SRH care seeking		↑	↑
Sexual risk behaviours	Sexual debut			
	Transactional sex			
	Condom use during the most recent sexual intercourse			
Gender attitudes	Gender-equitable attitudes	↑↑	↑↑	
Violence	Experienced violence		↓↓↓	↓
	Perpetrated violence	Not measured	↓↓	

Notes: ↓ refers to a decrease in the outcome and ↑ indicates an increase in the outcome. Black arrows refer to impacts for the pooled sample (males and females), purple arrows refer to the female sub-sample and green arrows refer to the male sub-sample; empty box indicates no (null) impact unless otherwise specified. §Locus of control measures the degree to which adolescents believe that they have control over the outcomes of events in their lives, as opposed to external forces governing their decisions.

Below we highlight some key findings from the 2021 data collection, representing round four of the household survey and round six of the health-facility (HF) survey.

Facility characteristics and adolescent-friendly services

- We provide contextual information on health facilities to help set the scene and interpret findings among adolescents. The intervention provided health-facility strengthening training on adolescent-friendly services in July 2018; however, this training was not ongoing and ended two and a half years before the surveys described in this report.

- Approximately half the facilities had staff trained in youth-friendly HIV/SRH services and 54 per cent of facilities had implemented changes in adolescent-friendly services over the study period (2017–2021). There was a notable increase in the percentage of facilities having trained staff on gender-based violence (GBV) services, after health-facility strengthening activities, rising from 34 per cent to 43 per cent between HF rounds three and five. This, however, dropped to 34 per cent in HF round six. The latter data were collected after the start of the COVID-19 epidemic and may reflect reduced intentions to seek health services in an effort to avoid contracting COVID-19.

- We observed some improvements in adolescent-friendly characteristics in HF round five, including having a referral system in place for adolescents and having regular supervisory visits from the Ministry of Health or similar trainers.

- Inclusion in health services for adolescents also improved over the period of the study. The proportion of facilities that offered HIV treatment to all youth (both married and unmarried, as opposed to just married youth), more than doubled – from 40 per cent in HF round four to 89 per cent in HF round six. Almost all facilities provided contraceptives and HIV-testing services for all youth, and 85 per cent offered reduced-cost or free services for youth who could not afford the full price in HF round six.

Services and supplies

- The percentage of health facilities offering outreach and HIV-treatment services to adolescents increased over the study period (2017–2021).

- The services that experienced an increase in the number of opening hours for adolescents included outpatient consultations, GBV services and postnatal care, although some services (antenatal clinics, HIV treatment and prevention of mother-to-child transmission (PMTCT)) were reduced compared to HF round five.

- There were increases in the supply of modern contraceptives throughout the study, prior to the COVID-19 epidemic.

Education and economic activities

- In round three, there was an increase in school dropout in cash-plus villages, which probably resulted from a combination of factors, including the business focus of the cash-plus training, and contextual conditions, such as financial barriers to education, lack of vocational training facilities available locally and (perceived) low returns to schooling. This unintended impact was no longer evident in round four, by which time the vast majority of youth had left school permanently, in both treatment and control villages. As in previous rounds, there was no impact on school attainment (defined as the highest grade of education completed). Thus, adverse effects on school participation observed in round three did not translate into sustained, adverse impacts on educational attainment.

- Similar to round three, in round four, youth in cash-plus villages were significantly more likely to be running a business than youth in the control group. Moreover, we observed positive impacts of the intervention on revenues and profits.

- Although the intervention did not change the probability of participating in at least one economic activity in the week before the interview, it did increase participation in some specific activities, such as livestock keeping and farm work for the household.

- Linking youth with professionals and technical people working in the area of business the youth had chosen to pursue was mentioned in qualitative interviews as one of the cash-plus programme's long-term impacts on livelihood enhancement.

- Youth exposure to work-related hazards was not affected in round three, while, in round four, exposure to hazards increased due to higher youth engagement in specific types of economic activities (e.g., farm work) following the intervention.

- Youth engagement in household chores was not affected by the intervention except for one activity – taking care of ill and elderly people, which had increased by round four as a result of the intervention.

Mental health

- Despite protective effects on mental health in round three, the cash-plus programme increased the likelihood of the pooled sample experiencing depressive symptoms in round four.

- As in previous rounds, the programme had no impact on self-perceived stress.

Attitudes

- In round three, positive programme impacts on self-esteem were observed, but these were not found in round four, by when self-esteem had increased in both treatment and control villages. The same holds for impacts on entrepreneurial attitudes.

- Similar to round three, in round four, the programme did not have an impact on social support, subjective well-being or adolescent decision-making.

Gender attitudes

- By rounds two and three, the cash-plus programme had increased gender-equitable attitudes, particularly among males. This impact, however, was not sustained by round four. We found that gender-equitable attitudes increased over time among the pooled, male and female samples, and this was the case for both control and treatment groups.

HIV and SRH

- While the intervention increased knowledge about contraceptives in the early rounds, this impact was not sustained by round four as, by then, both control and treatment groups had very high levels of knowledge that were statistically similar. As in previous rounds, however, the intervention did not increase the use of contraceptive methods.

- The positive impacts on HIV knowledge and testing found in round three were not sustained. Rates of HIV testing increased over time, however, and the earlier impact of this intervention on this outcome may still result in higher levels of well-being for youth in the future.

- By round four, the cash-plus intervention had increased the probability of adolescents reporting no risk of HIV as opposed to a low, moderate or high risk.

- Similar to previous rounds, the intervention had no effects on marriage or cohabitation, the first sexual intercourse being forced, age-disparate relationships, sexual debut or transactional sex. Analysis by sub-samples showed increases in marriage or cohabitation within the male sub-sample.

- The intervention decreased the probability of youth having a boyfriend or a girlfriend, and although it did not affect the pregnancy status of females in our sample, it did increase the likelihood of the partners of males (particularly married men) in our sample being pregnant.

Access to SRH services

- There were sustained programme impacts on male use of health services, consistent with findings from round three.

- The cash-plus intervention increased the likelihood that adolescents knew that they could seek contraception and pregnancy tests at a dispensary, and this impact was driven by the female sample.

- Among both males and females, the most common reason for seeking services was to obtain condoms. A significant proportion of females, however, also sought services for pregnancy, maternity or gynaecological examinations.

- Rates of health insurance coverage were low in this sample (8.5–11 per cent) and the programme had no impact on this outcome.

Violence

- The cash-plus intervention reduced the risk of experience of sexual violence among females by 7.2 percentage points.

- The programme had no impact on emotional violence, physical violence or intimate-partner violence experiences.

- The programme had no impact on any of the violence-related reporting (help-seeking) indicators among females, but it did increase the likelihood of male survivors seeking help from formal sources.

- There were no impacts on the perpetration of emotional violence, and reductions in the perpetration of physical violence among males found in Round 3 were not sustained in Round 4.

Gender-responsive and age-sensitive social protection (GRASSP) analysis

- Long-term impacts on gender-equality outcomes:

  - Impacts of the programme on gender-equitable attitudes noted in rounds two and three were not observed in Round 4.

  - We observed sustained positive impacts on females running a business, male use of health services, females' knowledge of where to obtain contraception and pregnancy tests, and a reduction in females reporting experience of sexual violence.

  - Within households, impacts on how participants spent their time were gendered; we observed increases in livestock keeping and farm work due to the programme among females only.

  - New impacts in round four included an increase in care work (for ill and elderly people) by females and an increased likelihood of males reporting their partner having been pregnant.

- Gendered impacts of payment delays on PSSN households:

  - As part of the current study, we followed up with PSSN households to understand how they continued to cope with protracted PSSN payment delays over an 18-month period between 2019 and 2020.

  - In response to the delays, households reduced the size and number of meals they consumed per day, had higher levels of debt, sold assets such as livestock, increased the amount of casual labour they did (both adults and children), reduced their use of health services or purchase of medicines, and reduced investments in small businesses; school attendance was also affected.

  - These coping strategies did not appear to be gendered, nor did we find evidence that the payment delays exacerbated existing gender inequalities. We did, however, find that pre-existing patterns of work and division of labour were gendered in this sample.

- Implementation and its influence on gender-equality outcomes:
    - Important factors in the achievement of various gender-equality outcomes included the information sessions, the gender-sensitive recruitment of mentors and peer educators, and the mixed-sex training.
    - Some components, such as the productive grant, economically empowered females and improved their social standing and confidence in avoiding risky sexual behaviours.
    - Gaps in the referral system within the study communities were identified as a factor that prevented survivors reporting or seeking formal help after experiences of violence.
- Moderating influences of contextual factors:
    - Service access or gender norms had a limited role in moderating programme impacts, with some exceptions.
    - Conservative norms regarding contraceptive use led to adverse programme impacts in this area and progressive norms in terms of female decision-making enabled the intervention to be effective at delaying sexual debut.
    - The intervention led to increased health-seeking behaviour among female adolescents in communities with poor access to high-quality health services, illustrating how information and linkages can improve some outcomes and address access issues in underserved communities.

Based on the findings in this study, we propose the following research and programme recommendations:

Research recommendations:

1. Replicate the intervention and evaluation in a different setting to examine whether the findings are replicable in a different context and how contextual factors may influence impacts. Identify effective intervention components, synergies and the influences of contextual factors through systematic reviews of similar types of multisectoral programmes for adolescents.
2. Conduct research on contextual barriers to schooling and learning, including school quality and the role of gender norms in shaping education and employment opportunities.
3. Carry out research to understand the synergistic impacts of 'cash' and 'plus' components, as the current study measured impacts of the 'plus' element only.

4. Perform longer-term follow-up of the sample in this study (and other similar studies examining bundled interventions targeted at adolescents) to understand whether these adolescent-targeted interventions continue to have benefits in early adulthood.

Programme recommendations:

1. Ensure access to vocational training, for example, through tuition and boarding vouchers or other interventions that address cost barriers.

2. Ensure that the cash-plus training curriculum and its implementation methods are designed to incentivize schooling and training.

3. As this and similar programmes are upscaled, strengthen cross-sectoral coordination and systems, including linkages to HIV and SRH services.

4. Strengthen gender-based violence referrals and response services.

5. Consider the important gender lens in economic-empowerment programmes.

6. Implement broad gender-norm interventions to maximize the impact of interventions such as cash plus.

7. Improve coordination between development partners and the linking of their services.

1. Introduction and background

This report presents the round-four findings from the impact evaluation (2017–2021) of a 'cash-plus' model for youth well-being and safe, healthy and productive transition to adulthood. The model was implemented under the Government of the United Republic of Tanzania's Productive Social Safety Net (PSSN) by the Tanzania Social Action Fund (TASAF), in collaboration with the Tanzania Commission for AIDS (TACAIDS), and with technical assistance from UNICEF Innocenti, University at Buffalo and EDI Global, in collaboration with TASAF, TACAIDS and UNICEF Tanzania, implemented the impact evaluation.

This cash-plus model was designed in recognition of gendered and poverty-related vulnerabilities faced by adolescents during transition to adulthood. It was designed and implemented within the structures of the Government of the United Republic of Tanzania's flagship social-protection programme, the PSSN, and aligned with official efforts to design livelihood-enhancement initiatives during phase one of the PSSN. The intervention occurred between January 2018 and July 2019, and the main evaluation took place between 2017 (baseline) and 2019 (endline). The current report describes findings from data collected 20 months after the end of the intervention in order to understand longer-term impacts, which take time to materialize, and to examine the sustainability of impacts observed in rounds two (2018) and three (2019). In this report, we also take a closer look at how implementation factors influenced gender-equality outcomes and how contextual factors moderated programme impacts.

1.1 Background

The young people population of the United Republic of Tanzania (ages 15-34 years) is expected to increase from 17.8 million in 2015 to 62.3 million by 2065 (African Institute for Development Policy, and University of Southampton, 2018; National Bureau of Statistics, and Office of Chief Government Statistician [Zanzibar], 2014). During adolescence, there are intense physical and emotional transformations and rapid brain development. Adolescence is posited to represent a unique window of opportunity, and investments in adolescence are often referred to as having a "triple dividend" (Patton et al., 2014). This is because investments in adolescence have impacts today, in adolescents' future adult life and in the next generation of children. Moreover, the importance for economic growth of investing in adolescent and youth has been increasingly recognized by policymakers, campaigners and researchers. Now, the United Republic of Tanzania is poised for a once-in-a-lifetime opportunity, referred to as the "demographic dividend", due to changes in its population structure. This dividend occurs when there are smaller birth cohorts (from decreases in fertility), leading to a larger than normal working-age population, relative to the young and elderly (Gribble and Bremner, 2012). Subsequently, this demographic dividend can be harnessed for economic growth and development. Nevertheless, this dividend is not automatic; it

requires youth to be prepared with the necessary educational, economic and livelihood skills, while simultaneously being empowered to address their health (including sexual and reproductive health (SRH)) needs in order to transition safely to adulthood, and delay marriage and childbearing. At the same time, to harness this dividend, it is necessary for governments to make adequate investments in health, infrastructure and education, and to enable market conditions that facilitate fair competition and labour-intensive job growth in the private sector (Locke Newhouse, 2015). These formal employment opportunities are also necessary for promoting inclusive growth and funding contributory social-protection programmes, which can improve general welfare and help end the intergenerational persistence of poverty. Investments made today will largely determine whether the United Republic of Tanzania is able to translate its demographic dividend into accelerated economic growth, peace and stability, or, alternatively, whether it will result in irreversible loss of opportunity (Jenkins and Bangser, 2015).

In the United Republic of Tanzania, adolescents and youth face many risks related to poverty, early pregnancy and marriage, violence, HIV and lack of formal livelihood opportunities (Haji, 2015; Population Council, et al., 2015). Moreover, during adolescence, the gendered norms of adolescents' sociocultural environments play an increasingly important role in their lives (GAGE Consortium, 2017). These norms often shape opportunities and, for females, this often means that choice and opportunities are constrained. It is important to expand the capabilities of all adolescents, including females, not only to improve their health and well-being now and in the future but also to maximize the United Republic of Tanzania's ability to develop a healthy and productive future labour force in order to harness the demographic dividend.

One way in which governments can invest in adolescents is through social protection. Cash-transfer programmes like the United Republic of Tanzania's PSSN are a popular social-protection tool. They have been shown to enhance households' food security (Hidrobo et al., 2018), food and non-food consumption, productive activities (Davis et al., 2016), as well as improve children's school enrolment (Baird et al., 2014). These programmes' primary objectives do not usually include outcomes such as improvements in adolescent mental health, reductions in risk behaviours and reductions in violence. Nevertheless, by targeting poverty and vulnerabilities, these programmes may address some of the structural drivers of these adverse outcomes.

In this way, social protection, including the pilot project evaluated in the current study, can promote human rights. For example, references to human rights, as outlined in the Universal Declaration of Human Rights and included in the current evaluation, include those related to 'security of person' (violence), 'full equality' (analysis of gender equality), 'the right to marry and found a family' (examination of sexual and reproductive health outcomes), 'protection by the state' (social-protection programming), 'property ownership' (assets and business), 'economic rights', 'right to work', 'right to leisure' and 'right to education'.

A growing body of evidence from Africa suggests that cash transfers can facilitate safe transition to adulthood. However, they are not a silver bullet, and impacts vary by context and target group. Governmental cash-transfer programmes in the region increased school enrolment (Handa and de Miliano, 2015), delayed sexual debut and pregnancy, and reduced transactional and age-disparate sex for female adolescents (Cluver et al., 2013; Handa et al., 2014; Heinrich et al., 2017). Other non-governmental cash-transfer programmes (both conditional and unconditional) have been shown to reduce intimate-partner violence (IPV) and delay sexual debut, pregnancy and marriage, as well as reduce HIV infection among adolescent girls (Baird et al., 2012; Handa et al., 2015; Pettifor et al., 2016).

Nevertheless, these protective effects vary depending on programme characteristics and context. For example, delays in sexual debut and pregnancy resulted from governmental cash transfers in Kenya and South Africa, but not in Malawi, the United Republic of Tanzania, Zambia, or Zimbabwe. Furthermore, some of these findings, including those related to IPV among adolescents and reduced incidence of HIV, came from small-scale, non-governmental pilot programmes that were not targeted at poverty; to date, similar studies of governmental cash transfers have not replicated these findings (see, for instance, Baird et al., 2012). Reductions in physical violence more broadly (i.e., not just IPV), however, have been found in relation to Zimbabwe's Harmonized Social Cash Transfer (Chakrabarti et al., 2020). Moreover, the findings from the one study that did reveal reductions in HIV were varied, depending on how the data were analysed (Webb et al., 2012), and statistical power to estimate intervention impacts was limited by the low incidence of HIV during the study period. Mental health among adolescents has also improved as a result of cash-transfer programmes in the region (Angeles et al., 2019; Kliburn et al., 2016). However, one study suggested that effects on mental health may be adverse when cash-transfer programmes are conditional, compared to unconditional (Baird et al., 2013).

In the United Republic of Tanzania, specifically, between 2015 and 2017, an impact evaluation was implemented to understand how the country's PSSN programme influenced youth well-being. The PSSN was found to improve youth well-being, including increased school enrolment and a reduction in children's paid work, and to have positive impacts on basic needs, youth perceptions of control over their own lives, participation in household decision-making and social support (Tanzania PSSN Youth Study Evaluation Team, 2018). These positive impacts came with caveats related to children's schooling and work; there was not always a direct trade-off and, in agricultural households, increased financial resources and subsequent investment (e.g., in livestock) were often accompanied by children's increased participation in work for the household (e.g., tending livestock). Furthermore, as mentioned above, findings related to mental health were mixed, with protective effects for males, but increased risk of poor mental health for females resulting from the PSSN (Prencipe et al., 2021). Less positive findings indicate that the programme had no impact on other outcomes related to safe and healthy transition from adolescence to adulthood, including delayed sexual debut and pregnancy, contraceptive use, risky sexual behaviour and mental health.

A related body of evidence on 'bundled' interventions targeted at adolescents recognizes that adolescents often face interlinking economic and reproductive-health challenges (Bandiera et al., 2019). In order to facilitate safe transition to adulthood, adolescents use different combinations (or bundles) of economic strengthening (e.g., savings accounts, cash transfers, financial literacy, productive grants) together with training or information on gender and reproductive health topics, mentoring and/or accessing 'safe spaces' (where adolescent females can meet). The combination of components has varied, as has the age range of target groups, but several interventions have been implemented in Africa in recent years (generally, for females only). The evidence indicates that these programmes have the potential to facilitate safe and healthy transition to adulthood.

Nevertheless, several evaluations of bundled interventions have either failed to find any impact on the main intended outcomes or have found that a majority of significant impacts disappear completely as soon as two years after the end of the programme. For example, the Empowerment and Livelihood for Adolescents (ELA) programme, implemented by the Bangladesh Rural Advancement Committee (BRAC), Uganda, targeted females aged 14 to 20 years. It led to impressive increases in entrepreneurial skills, income-generating activities and health knowledge, while simultaneously reducing forced sex and delaying childbearing and marriage, although it had no impact on outcomes such as wages, use of contraception other than condoms and preferences related to marital age (Bandiera et al., 2019). Many of the ELA programme impacts disappeared two years after the end of the programme (although reductions in forced sex and delayed marriage age were sustained), and when BRAC attempted to implement the same programme in the United Republic of Tanzania, they failed to find any productive or protective impacts (Alam, 2016).

In Liberia, the Girl Empower programme, which combined cash transfers, gender-transformative training and mentoring targeted at females aged 13 and 14 years, failed to have any impact on its main objective of reducing sexual abuse; nor did it have any impact on schooling, psychosocial well-being or broadly defined "protective factors" (Özler et al., 2020).[2] There were, however, protective impacts on SRH knowledge, gender attitudes and life skills. In Zambia, the Adolescent Girls Empowerment Programme (AGEP) targeted females aged 10 to 19 years and combined mentoring and safe spaces with health, life-skills and financial education, as well as savings accounts (among a subsample of the females). This programme had positive impacts on outcomes directly related to programme components, such as reporting having a safe place to meet friends and financial literacy, but did not have any impact on the main intended outcomes, including educational attainment, pregnancy and marriage age, birth rates, experience of violence, or HIV or herpes simplex virus type 2 (HSV-2) prevalence (Austrian, Hewett, et al., 2016). AGEP, however, reduced reports of transactional sex and increased condom use at first sexual intercourse.

2 Özler, et al., 2020, p. 100527.

There have been similar programmes in Uganda and Kenya, also with mixed findings (Austrian and Muthengi, 2014; Austrian, Muthengi, et al., 2016). For example, the Adolescent Girls Initiative-Kenya (AGI-K) targeted females aged 11 to 14 years and provided various treatment combinations, including conditional cash transfers to household heads, health information, wealth creation information and/or violence prevention (Austrian, Muthengi, et al., 2016). In the Kibera settlement, the comprehensive treatment package had positive impacts on primary-school completion and transition to secondary school, while the health component was found to improve SRH knowledge and self-efficacy, and the violence/education and violence/health/education packages reduced experiences of violence. However, other combinations of the intervention packages did not reduce experience of violence and none of the study arms resulted in improved gender-equitable attitudes. Also in Kenya, in Wajir, the conditional cash transfer increased grade attainment and school enrolment, while the wealth component improved behaviours related to savings.

In the United Republic of Tanzania, a cash-plus initiative (providing cash combined with financial education), implemented by a non-governmental organization (NGO) under the Determined, Resilient, Empowered, AIDS-free, Mentored and Safe (DREAMS) umbrella, targeted female adolescents (aged 15 to 23 years). Qualitative interviews were conducted in order to understand how the programme was working. These suggested that the intervention reduced dependence on male sex partners for basic needs (Pettifor et al., 2019); however, programme impacts were not measured quantitatively. Moreover, the programme was only targeted at out-of-school girls and the evaluation did not collect information on how this targeting may have affected the schooling decisions of in-school girls at the time of study enrolment. Among these summarized studies, only the ELA programme in Uganda examined post-intervention impacts (i.e., after the intervention had ended and time had elapsed).

In view of these mixed findings and the recognition that cash-transfer impacts, while positive and powerful (Cirillo et al., 2021)[3] , often cannot address all the myriad vulnerabilities faced by adolescents (Tirivayi et al., 2021), there is increasing interest in integrated social protection, which links social-protection programmes with complementary services and programmes. Some types of integrated social protection are often referred to as 'cash plus', which is defined as cash transfers combined with one or more types of complementary support. This support may consist of integral elements (e.g., additional benefits, in-kind transfers, information, behaviour-change communication or psychosocial support) or external components (e.g., direct provision of access to services or facilitating linkages to services) (Roelen et al., 2017). The United Republic of Tanzania has experimented with various cash-plus initiatives within the PSSN, including nutrition sensitization with technical support from UNICEF, youth-livelihood training with technical support from the International Labour Organization

3 Overwhelmingly, studies have not found negative or adverse effects of social protection, including cash transfers, on adolescent well-being (although we acknowledge there are a few exceptions). There are sometimes null effects on some outcomes, however, indicating that cash transfers alone cannot always improve all aspects of well-being.

(ILO) and contraceptive-knowledge sensitization with technical support from the United Nations Population Fund (UNFPA).

Informed by previous evaluations of the PSSN, a unique, multi-sectoral, government-implemented, cash-plus pilot targeted at adolescents in PSSN households was implemented within the PSSN, starting in 2018. The findings from an evaluation of this pilot are the focus of the current report. The evaluation builds on learning from the Transfer Project, a multi-organization consortium providing evidence on government-run cash transfers in Africa, with a focus on safe transition to adulthood for youth.[4]

To our knowledge, this study is the first to specifically examine impacts of a cash-plus model on youth well-being and transition to adulthood *implemented within the context of a government transfer programme in Sub-Saharan Africa*. The government ownership and implementation aspect of this intervention has important implications for sustainability and upscaling. Indeed, since this cash-plus programme was first piloted in four districts/councils in the Iringa and Mbeya regions in 2018, it has been upscaled to an additional seven districts/councils (in the Kigoma and Songwe regions) between 2020 and 2022. None of the aforementioned bundled interventions targeted at adolescents were run by governments. Therefore, this study provides unique insights and can inform future upscaling of integrated social-protection programming. On a broader level, this intervention and the findings of this study also complement the literature on economic inclusion and livelihood programming, which focusses on increasing the incomes and assets of individuals, households and communities (Andrews et al., 2021). Economic-inclusion initiatives are increasingly being piloted or upscaled by governments, but, to date, the evidence on their effectiveness largely comes from smaller-scale graduation pilots implemented by non-governmental entities.[5] Together with other recent studies (Bossuroy et al., 2022), the current study contributes to addressing this knowledge gap in relation to multifaceted economic inclusion and cash-plus programming implemented by governments. Moreover, given our focus on multidimensional well-being, the study contributes to the growing literature on not only livelihood-related impacts but also psychosocial impacts of cash-plus programming, which many studies have failed to measure (Özler et al., 2020, is a noTable Bxception).

In addition to looking at multidimensional vulnerabilities, this pilot study and evaluation addressed gender-responsive social-protection programming. A critique of many existing social-protection programmes around the world is that they are 'insufficiently gender sensitive' or deal only superficially with gender, even though gender inequality plays a large role in creating and perpetuating poverty and vulnerability (Holmes and Jones, 2013). Beyond these drivers of poverty, responses to poverty are often gendered. Moreover, many adverse outcomes caused by gendered vulnerabilities resulting from poverty are related to women's and girls' SRH vulnerability, combined

4 The Transfer Project is currently operating in more than 10 countries and includes impact evaluations on youth in five countries. For further details see: <https://transfer.cpc.unc.edu/>, accessed April 2023.
5 See, for instance, Banerjee, et al. (2015).

with structural barriers to healthcare access due to social norms (Gavrilovic and Palermo, 2020). In recognition of these gendered vulnerabilities, in the cash-plus pilot described here, we pay close attention to gender in the design, implementation and measurement of programme impacts.

In interpreting findings from this round-four report, there are six main points to keep in mind.

1. Data collection occurred 20 months after the end of the intervention, so this report examines whether impacts of the intervention were *sustained*, not whether they ever existed. Data-collection fieldwork for round four of this evaluation happened between February and March 2021, while the final intervention component was delivered in July 2018. Thus, while some impacts of the intervention components may have taken time to materialize, others may have dissipated between the end of the programme and the most recent data collection.

2. *Payment delays* occurred in the overall PSSN during the study period (affecting both treatment and control households, as all received the PSSN but only the treatment group received the 'plus' intervention). In the transition between phases one and two of the PSSN, in 2018 and 2019, prolonged final negotiations between the Government and the World Bank, which loaned the majority of funds used to implement the programme, led to gaps in funding availability. For the first time since the start of the PSSN in 2015, all households experienced a delay in the bimonthly PSSN transfers after March 2019, shortly before data were collected for round three. Households received their last full payment in March 2019 and should then have received another payment in May of that year. This did not occur and regular payments did not resume until September 2020 (with the exception of one payment to some households in December 2019). Thus, households experienced an 18-month stoppage of their PSSN payments, which had previously been delivered every other month. This may have mitigated some of the potential positive benefits of the cash-plus intervention as households were coping with an unexpected loss of regular support during the study, and adolescents may have been obligated to support household needs. While payments had resumed prior to the round-four data collection (*see Section 1.3*), households may still have been recovering from the significant loss of income over an extended period of time. Thus, without these payment delays, adolescents may have been able to leverage the cash-plus intervention for more transformative effects.

3. The *COVID-19 pandemic* began between round three (when the intervention ended) and round four (data collection). The pandemic had major, adverse economic effects, including loss of income and increased food prices, which likely mitigated some of the economic benefits of the intervention.

4. Evaluation outcomes examined in this study cast a wide net. Recognizing the *multisectoral inputs* of this intervention and the potential impacts on a broad range

of aspects of adolescent well-being, we examined a broad range of outcomes. We studied impacts on economic participation, school attendance, health, violence and other aspects of well-being. We did not expect the programme to have a significant impact on all outcomes. However, we tested the broadest range possible as the programme aimed to address the multifaceted aspects of risk and vulnerability faced by adolescents, recognizing that economic vulnerability is closely linked to and mutually reinforces health-related vulnerabilities.

5. At the time of the round-four interviews, youth were aged 18 to 24 years. Thus, outcomes that may be considered 'adverse' in adolescence, such as pregnancy and marriage (coinciding with earlier rounds of data collection), may be considered normal or even desired in the older age range.

6. Evaluations of many similar, multifaceted interventions targeted at adolescents (and almost exclusively at females) in Southern and Eastern Africa have either failed to find impacts on their main intended outcomes or have found that a majority of significant impacts disappear completely as little as two years after the end of the programme.

This report is organized as follows. The remainder of Section 1 presents information on the PSSN and cash-plus programmes. Section 2 outlines the conceptual framework informing the programme and evaluation. Section 3 describes the impact evaluation framework and sample, while Section 4 describes attrition. Section 5 discusses programme implementation, while Section 6 presents findings related to health-facility surveys. Sections 7 to 13 describe impacts by topic, Section 14 provides an in-depth exploration of how implementation characteristics of the intervention may have influenced gender-equality outcomes, and Section 15 concludes highlighting the contributions of the study and reporting the main research and programmatic recommendations.

1.2 The United Republic of Tanzania's Productive Social Safety Net (PSSN)

The PSSN is implemented by the governmental agency TASAF, which was established in 2000 as part of a government strategy to supplement poverty-reduction initiatives using a community-driven development approach.[6] Then, in 2012, the PSSN

6 TASAF started with a one-year pilot (from 1999 to 2000) in eight of the poorest districts of the United Republic of Tanzania: Bagamoyo, Bukoba, Dodoma, Kibaha, Rombo, Shinyanga, Singida and Tandahimba. TASAF I, which was the first phase (2000–2005), focussed on: improving social-service delivery; capacity enhancement for communities, including overseeing 1,704 community-run sub-projects, such as construction and rehabilitation of healthcare facilities, schools and other small-scale infrastructure; and a public works component with 113,646 direct beneficiaries. TASAF II, the second phase (2005–2013), built on the Millennium Development Goals and expanded the first-stage commitments to address: a shortage of social services; capacity enhancement (including 12,347 community sub-projects); and income poverty, including a pilot conditional cash transfer that reached 11,576 households in communities were strengthened during the first phase. Phases I and II of TASAF were successfully implemented and achieved the programme objectives.

programme (TASAF III) was officially launched. The PSSN was gradually expanded in coverage and benefit scope, including two main phases: PSSN I (until 2019) and PSSN II (effective from 2020) (World Bank, 2019). The period covered in this evaluation study (2017–2021) overlapped with portions of both PSSN I and II. Initially, the PSSN aimed to support approximately 275,000 extremely poor households in selected poor communities in rural and urban areas. With the overall objective of halving extreme poverty, in September 2013, the Government of the United Republic of Tanzania, in collaboration with development partners, agreed to upscale PSSN to support 1.2 million households living below the food-poverty line nationally. The programme included the consolidation of integrated social-safety-net interventions to maximize the impact of a social safety net, through implementation and upscaling of labour-intensive public works and cash-transfer interventions to targeted extremely poor and food-insecure groups. The programme also consisted of livelihood enhancement that involved income-generating activities for the targeted poor and vulnerable groups. The PSSN programme used a three-stage targeting process, involving geographical targeting, community-based targeting and a proxy means test (PMT). In the first stage, national poverty maps were used to identify the poorest project area authorities (PAAs) and villages. At the village level, village assembly meetings selected community teams to list the potential beneficiaries, who were later approved by both village council and village assembly meetings. The households identified during this process were then surveyed for the PMT to ensure they met the poverty criterion. Those who met the poverty criterion (i.e., those who scored below the designated threshold) were then enrolled in the programme. By early 2016, the conditional cash transfer (CCT) component had enrolled over 1.1 million of the poorest households in the United Republic of Tanzania, or approximately 10.5 per cent of the total population, in 70 per cent of all villages in the country.

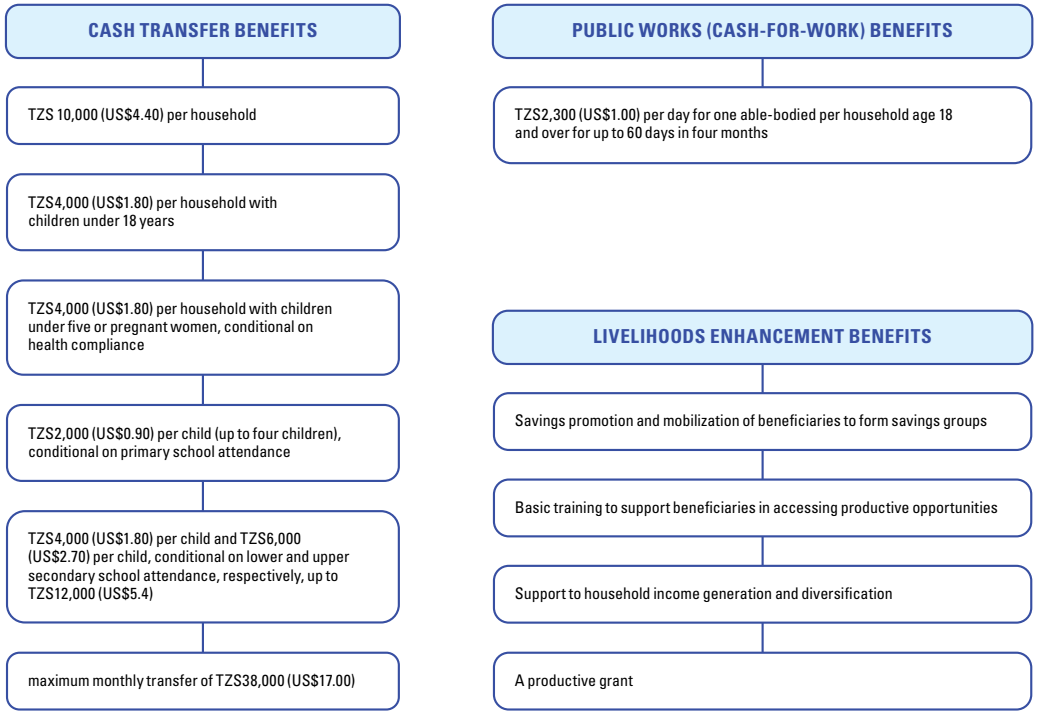
The objectives of PSSN I included: increase overall consumption among the extremely poor on a permanent basis; smooth consumption during lean seasons and shocks; invest in human capital; strengthen links with income-generating activities; and increase access to improved social services. It aimed to improve consumption and human-capital accumulation, and reduce the poverty headcount and poverty gap by 5 per cent and 30 per cent, respectively.

PSSN I had four components:

1. establishment of a national safety net, incorporating transfers linked to participation in public works (PW) and adherence to co-responsibilities in relation to CCTs
2. enhancement of livelihoods and increasing beneficiaries' incomes
3. targeted infrastructure development (in education, health and water)
4. capacity building to ensure adequate programme implementation.

We present an outline of the benefit and fee structure of PSSN I (*see Figure 1.1*).

Figure 1.1: Payment and benefit structure of PSSN phase one



Source: World Bank (2019)

The programme also aimed to: improve the ability of vulnerable populations to cope with shocks; invest in human capital; and increase access to improved social services. The key element of the programme was a CCT provided to households living below the food poverty line, complemented by public works and livelihood-strengthening components. To receive payments, participating households were required to comply with certain conditions (or 'co-responsibilities') related to children's school attendance and healthcare. A portion of the cash transfer, however, was fixed and unconditional, providing eligibility conditions were met in terms of household poverty and the number of children in the household. The last regular payment under phase one of the PSSN was made in March 2019, with one bilateral donor-supported payment cycle occurring in December 2019.

PSSN II runs from 2020 to 2023 and the first two payments under this phase were made in September and October 2020, when two payments were made in one cycle in an effort to minimize contact and prevent the spread of COVID-19. Prior to the phase-two roll-out, between June and August 2019, TASAF conducted a validation process among 886,724 PSSN households to verify their continued eligibility. Among these households, 211,674 were deemed 'not poor' but continued to received transfers, while a further 494,348 households were added to the programme in 7,217 newly targeted villages (not previously reached under PSSN phase one).

Under the current PSSN II benefit structure, there is a fixed transfer of TZS12,000 (approx. US$5) per household and additional fixed transfers of TZS5,000 (approx. US$2) for each of the following categories (maximum one per household): children aged under 18 years, infants aged under 5 years (conditional on regular attendance to health centres for key child health services) and household members with a disability. Beyond these fixed amounts, there are additional, variable monthly amounts for children, conditional on school attendance, which vary by grade level, ranging from TZS2,000 (approx. US$0.85) for lower primary to TZS8,000 (approx. US$3.4) for upper secondary. The maximum amount for each household is capped at TZS55,000 per month (approx. US$24).

The cash-plus pilot that is evaluated in the current report was implemented between 2018 and 2019, under PSSN I. However, our period of study (2017–2021) for the current evaluation, which examines impacts after the end of the intervention, overlaps parts of both phases one and two of the PSSN.

Between 2018 and 2019, in the transition between PSSN I and II, prolonged final negotiations between the Government and the World Bank, which loans the majority of funds used to implement the programme, led to gaps in funding availability. These funding gaps resulted in the first widespread delay in PSSN payments, which lasted from March 2019 until September 2020. Prior to 2019, PSSN payments were highly efficient and made on time (Rosas et al., 2019). A 2020 report studied the impact of these payment delays on PSSN households (Zuilkowski et a.l, 2020). The report found that the vulnerable economic situation of these families was exacerbated by the payment delays. At the time of interviews for that report (June to August 2019), households had not received a payment for approximately four months, translating to approximately two missed payments. Both past and anticipated payment delays resulted in families not making the kinds of investment that would benefit their households in the future, such as the purchase of fertilizer for fields, adding capital to businesses or buying livestock. In the short term, these families had to conserve their minimal cash resources to pay for basic supplies, medical care, and educational costs. This economic insecurity created by the payment delays was further exacerbated by the onset of the COVID-19 pandemic in March 2020.

It is likely that the simultaneous, negative income shocks caused by the pandemic and payment stoppage may have dampened the positive effects of the cash-plus study summarized in the current report. This is because youth and the rest of their households had to use savings and other resources (in some cases, productive grants) and employ coping strategies in response to income loss and rising prices. While it is possible that the cash-plus intervention may have enabled youth in the treatment group to better cope with the effects of COVID-19 and payment delays than youth in the control group, it is also possible that these simultaneous shocks mitigated the overall impacts of the pilot. Had the payment delays and COVID-19 not occurred, we may have seen larger, more sustained impacts of the cash-plus intervention.

1.3 The 'plus' intervention: Programme details, training, and implementation

The design of the cash-plus model evaluated in this report was informed by a stakeholder workshop held in 2016 in Dar es Salaam, which was attended by the Government, UNICEF, development partners (e.g., the Department for International Development (United Kingdom) (DFID), ILO and the United States Agency for International Development (USAID) among others) and researchers from the region who reviewed the latest evidence on bundled interventions targeted at adolescents (Watson and Palermo, 2016). The cash-plus model was planned and designed as part of TASAF's PSSN programme and, in particular, its livelihood component. It was envisaged that the cash-plus intervention would make a significant contribution to the planned role of TASAF's livelihood programme and address a particular need of adolescents in TASAF households.

The cash-plus intervention was implemented by the Government of the United Republic of Tanzania through TASAF with support from UNICEF and in close collaboration with TACAIDS and the Ministry of Health, Community Development, Gender, Elderly and Children.

The cash-plus model complements the PSSN through a package of adolescent-focussed interventions comprising livelihood and life-skills training, mentoring and an asset transfer, as well as linkages to strengthened, adolescent-friendly government health services. Together, these components may ultimately have synergistic impacts, promoting sustainable and healthy livelihoods that increase resilience, well-being and empowerment today, tomorrow and for future generations.

During the final year of the cash-plus pilot implementation (2019), approximately 908,346 adolescents aged 14–19 years lived in households that were being reached by the PSSN nationally. Thus, findings from this evaluation are relevant for a large, key population. The cash-plus programme built on the cash-transfer and livelihood-enhancement components of the PSSN and was designed to fit within PSSN's Livelihoods Framework, closely aligning to the objectives of the programme. The PSSN livelihood component roll-out followed the adopted strategic approach to first design and then gradually implement the livelihood-enhancement packages in phases, before ultimately achieving full upscaling. The cash-plus programme built on and further strengthened existing local government capacity and services related to adolescent health, livelihoods and social protection. The cash-plus intervention evaluated in the current report was implemented in two pilot PAAs, which were chosen based on overlaps between TASAF priorities and regions in which UNICEF was supporting existing programmes. These PAAs comprise four districts/councils in Southern Tanzania: Mufindi and Mafinga in the Iringa region and Rungwe and Busokelo in the Mbeya region (*see Appendix A for a map of intervention sites*). After the conclusion of the pilot intervention (2018–2019), the programme was adapted based on findings from rounds two and three of this evaluation and then further rolled out in 2020 to: (1)

control villages in the four districts/councils and (2) five new PAAs in the Kigoma region and two new PAAs in the Songwe region.

The 'plus' intervention follows an 'asset strengthening approach' and aims to strengthen youths' productive, human and health assets. The guiding principles for the cash-plus programme are:

- government ownership
- implementation within TASAF/PSSN livelihood-enhancement strategy and existing government frameworks
- linkages with other government services
- age- and gender-sensitive livelihood interventions
- financial, health and social asset-building framework for adolescent development and well-being.

Based on a review of evidence of what works, stakeholder consultations and a consensus process, the programme was designed with the following three components:

1. **Adolescent livelihood and SRH and HIV life-skills training**: This component included concurrent training sessions on livelihood and economic empowerment, and SRH education and HIV prevention and treatment for adolescents. The programme built on lessons emerging from other initiatives and used a mixed-livelihoods approach to meet the diverse needs of older and younger adolescents. A bundle of high-impact behaviour-change communication approaches were also included, including peer support groups, to strengthen knowledge and skills among adolescents in relation to HIV prevention and treatment, SRH, violence prevention and promoting gender equity.

2. **Mentoring and coaching**: Parallel with and following the training sessions, the programme connected adolescent participants with community-based mentors who mentored and coached them on livelihood options and life concerns. This included referral to education, vocational training, savings groups or a productive grant.

3. **Supply-side strengthening and linkages to existing SRH and HIV services for adolescents**: The programme linked adolescent programme participants from PSSN households with HIV and SRH services that are responsive to and acceptable for adolescents.

The training of the programme implementers followed a cascade model, starting with 'training of trainers' (ToT). Trainees included community development officers, planning officers, nurses, medical doctors, social welfare officers, and agriculture and livestock officers. The timing of the ToT sessions and the implementation of the intervention activities was as follows:

- The district ToT training took place from 20 August to 1 September 2017. Twenty individuals were trained in the ToT sessions (10 from Rungwe/Busokelo and 10 from Mufindi/Mafinga).

- The mentors and peer educators were trained from 20 to 25 November 2017 in Mufindi and from 27 November to 2 December 2017 in Rungwe. A total of 130 mentors (58 from Rungwe/Busokelo and 72 from Mufindi/Mafinga) and 130 peer educators (58 from Rungwe/Busokelo and 72 from Mufindi/Mafinga) were trained. The male to female ratio was 1 to 1 in both Mufindi and Rungwe trainings.

The delivery of the livelihoods and HIV/SRH life-skills training occurred face-to-face over a 12-week period between January and May 2018. Facilitators met with youth groups in each village for two to four hours, once a week. The opening and closing weeks consisted of two-day workshops. The opening session focussed on getting to know each other and dangers and opportunities in the community. The closing session took the form of a 'graduation' ceremony, in which parents and community members were invited to celebrate the participants' achievements. Livelihood and HIV/SRH training was conducted jointly in each session (one to two hours for each, on a weekly basis). Some of the topics and activities covered in the livelihood and HIV/SRH life-skills training component of the intervention are listed below. For a detailed outline of the week-by-week, combined training topics see Appendix B in the Round 3 evaluation report (Tanzania Adolescent Cash Plus Evaluation Team, 2020b).

Livelihood training:

- changes
- aspirations
- goals
- business plans
- entrepreneurship
- business record-keeping
- savings
- obligations and requirements for entrepreneurs.

HIV/SRH life-skills training:

- our community and our health
- coping with puberty
- relationships
- HIV knowledge – prevention and protection
- sexual risk-taking and protection
- violence and gender-based violence
- pregnancy
- family planning
- sexually-transmitted infections (STIs)
- living with HIV and AIDS
- alcohol and drugs
- healthy living and nutrition
- addressing negative gender attitudes and norms.

Following the 12-week period of intensive training, asset transfers and additional mentoring activities began and continued for a period of nine months (June 2018 to March 2019). After March 2019, the cash-plus intervention activities ceased; however, PSSN payments (received by both treatment and control households) resumed in September 2020 (*see Section 1.3*).

Mentoring activities included facilitating linkages to training and apprenticeship activities, providing input on business plans, facilitating health-facility linkages and peer education. The programme connected adolescent participants with a community-based adult mentor. Two cash-plus adult mentors (one male, one female) per village were selected by local government staff and community members. Mentors were to offer regular support, guidance, and encouragement through meeting with adolescent cash-plus participants on a group basis first bimonthly and then monthly over the mentoring period. Adolescents were also encouraged to request one-to-one meetings with their mentors regarding specific individual or sensitive matters. In addition, young, trained peer educators functioned as the link between adolescents and mentors, and between adolescents and health facilities. Peer educators were selected among adolescents from PSSN households eligible for the cash-plus intervention by their fellow adolescents, supported by local government. Two peer educators (one male, one female) were selected from each village.

Mentors guided adolescents on their livelihood options and healthy life choices and provided guidance on educational or business plans. Specifically, mentors were tasked with the following responsibilities: (1) raising awareness of the viability of self-employment as a career option; (2) enhancing awareness among older adolescents about available vocational training opportunities; and (3) supporting start-up support services. For those who had not completed school, mentors provided support to complete their schooling. The adolescent–mentor partnership was built around an 'accompanied livelihood development' approach in which the adolescent makes his or her own decisions based on inputs and facilitation from the mentor. This approach has been found to be useful for fostering a culture of entrepreneurship and skills-building among young people (Chigunta et al., 2005). For adolescents aged 14–17 years, the mentorship focus was to develop confidence, communication skills and aspirations. The focus for older adolescents aged 18–19 years was to engage in livelihood training linked to local job opportunities and the execution of business plans.

A productive grant to support a business or education (schooling or vocational training) plan was provided for those adolescents who completed the training and who developed a plan that was approved by the village committee. Adolescents were advised that the grants were intended to help them start their own business or access vocational training for those out of school and to offer support to complete school for those who were still in school. Nevertheless, the grants were unconditional transfers and there were no penalties for using the money for other purposes. Out-of-school adolescents who submitted a viable business or vocational training plan could access the grant, as could in-school adolescents who submitted a schooling plan for staying in school. The grant amount was US$80. For those submitting a business plan, the grant was disbursed, in person, via two cash payments: the first US$50 payment was made alongside the regular bimonthly PSSN payments in March 2019 and this was followed by a standalone payment of US$30 in June 2019.[7] For those submitting an education-related plan the grant was disbursed in one cash payment during the March 2019 PSSN payment cycle. Mentors monitored the use of the grant to ensure it was used for the intended purposes, including to link adolescents with other technical support (including agricultural extension services, legal aid and vocational training) through the mentoring activities described above.

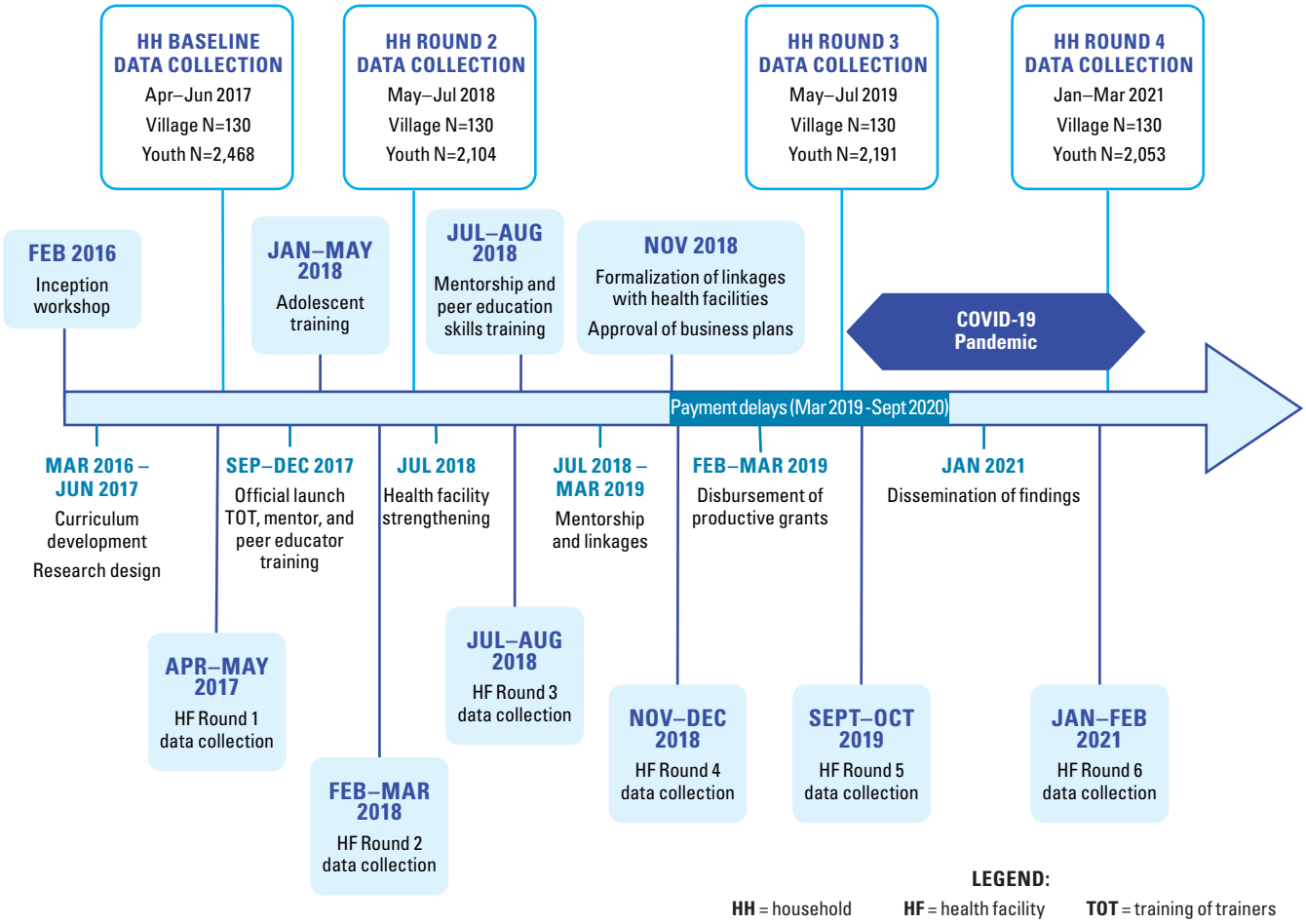
In the final component of the intervention, health facilities were strengthened to make them more adolescent friendly, and linkages were facilitated among adolescent programme participants. While health-service delivery is not under the purview of TASAF, which oversaw and implemented the Ujana Salana pilot, efforts were made to strengthen these services in the study communities. These efforts underscore TASAF's commitment to cross-sectoral linkages (e.g., promoting the use of health services has been a core component of PSSN since its inception). Health-facility training to strengthen adolescent-friendly services was conducted by the Ministry of Health, Community Development, Gender, Elderly and Children, with technical

7 For more detailed information on mentorship activities and business plan formulation, see Appendices C and D in the Round 3 evaluation report (Tanzania Adolescent Cash Plus Evaluation Team, 2020b).

assistance from UNICEF, in July 2018. This training leadership by the Ministry of Health, Community Development, Gender, Elderly and Children further demonstrates cross-ministerial commitment to the pilot project. The 'Standards for Adolescent Reproductive Health Services' served as a guide for strengthening services (Ministry of Health, 2004). These standards were developed in 2005 by the Ministry of Health, together with organizations interested in the promotion of adolescent-friendly reproductive-health services. Mentors and peer educators proactively linked adolescent programme participants to HIV, SRH and violence-prevention services via government health facilities in and around study communities throughout the mentoring and asset-transfer phase (from June 2018 to June 2019). This approach was informed by evidence demonstrating that programmes which promote access to and uptake of adolescent-responsive SRH and HIV services are more effective when facility-based interventions are combined with supportive adults and when community acceptance of accessing such services is promoted (Denno et al., 2015).

A timeline of intervention and research activities is provided (*see Figure 1.2*).

Figure 1.2. Timeline of intervention and evaluation activities



1.3.1 Scalability, sustainability and looking forward in pilot planning

This pilot intervention has high potential for sustainability and scalability, given its implementation within government frameworks (the livelihoods component of the TASAF III/PSSN programme) and its focus on facilitation of linkages to existing government services (primarily HIV/SRH services), rather than the development of parallel services. The feasibility of this approach has previously been demonstrated by an adolescent SRH intervention conducted with public-sector health workers in the United Republic of Tanzania (Hayes et al., 2005, Larke et al., 2010). Although components of this intervention are envisioned within national sectoral action plans, on the ground, they are often highly fragmented, of poor quality and rarely implemented in full. The current initiative adds unique value as it aims to develop or strengthen these linkages towards a more integrated systems approach, thereby reducing fragmentation of services and generating synergies for increased effectiveness. At the same time, it is building capacity to improve quality service provision to youth and is providing rigorous evidence on its effectiveness. Indeed, findings on programme impacts in rounds two and three were used to adapt the programme design and targeting prior to upscaling in 2020. For example, changes included targeting only out-of-school youth (instead of both in- and out-of-school youth) and modifying the curriculum.

1.3.2 The importance of evidence

This pilot intervention was rigorously evaluated through an impact evaluation to measure its effectiveness. Rigorous evidence is key to understanding both the effectiveness of programming for adolescents and how future programming can be improved and leveraged for better outcomes for youth. There are several examples of interventions in Africa with similar objectives (strengthening the capacities of adolescents), through bundled programming, which have been implemented by NGOs or researchers (Austrian, Hewett, et al., 2016; Austrian and Muthengi, 2014; Austrian et al., 2018; Bandiera et al., 2019; Buehren et al., 2017a; Dunbar et al., 2014; Özler et al., 2020). Some of these interventions have been rigorously evaluated, while others have not. Most of them make recommendations for upscaling, but often the necessary infrastructure for this is not in place and the evaluations were not tested through implementation structures conducive to upscaling. Context and inputs (including time and financial resources) differ when implementing interventions through government structures rather than NGOs or research studies. Delivery is key and thus it is essential to test interventions implemented through government structures in order to make assumptions or recommendations about upscaling. This was the aim of the current evaluation, namely, to pilot and evaluate an intervention through the structures that would be used were the programme to be upscaled.

1.4 Evaluation and objectives

Recognizing the importance of evidence to inform programme adaptation and upscaling, UNICEF Tanzania commissioned an impact evaluation of this pilot initiative,

with funding from UNICEF, Oak Foundation, the Swedish International Development Cooperation Agency (Sida), DFID and (in round four) the Foreign, Commonwealth and Development Office, United Kingdom (FCDO). Stakeholders in the evaluation include the PSSN participants, UNICEF, TASAF, TACAIDS and development partners, including the aforementioned funders. The evaluation was conducted by UNICEF Innocenti, University at Buffalo and EDI Global, in collaboration with TASAF, TACAIDS and UNICEF Tanzania. It was a rigorous mixed-methods impact evaluation with the objective of estimating the effects of this adolescent cash-plus initiative on youth well-being and the transition to adulthood. Oak Foundation, DFID (rounds one to three), Sida and FCDO (round four) had no influence on the analyses and interpretation. Other stakeholders (UNICEF, TASAF, TACAIDS) jointly designed the evaluation and interpreted the findings with the research team at annual writing workshops, which occurred after each survey round. The round-four writing workshop was held in Dar es Salaam in March 2022. Outcomes examined in this evaluation include those related to livelihoods, aspirations, schooling, attitudes, violence, partnerships, SRH and care seeking, and HIV knowledge, testing and treatment. The study builds on learning from the Transfer Project, a multi-organization consortium providing evidence on government-run cash transfers in Africa, including a study led by UNICEF Innocenti and Research on Poverty Alleviation (REPOA) (2015–2017) that examined the impacts of the PSSN on youth well-being and the transition to adulthood (Tanzania PSSN Youth Study Evaluation Team, 2018). The current evaluation strengthens the national evidence base on targeted programmes for adolescents and, more specifically, those implemented by the government. This round-four report examines whether impacts found in earlier rounds were sustained after the end of the programme. The report also aims to take a closer look at gender under the gender-responsive and age-sensitive social protection (GRASSP) research agenda and to answer how these longer-term impacts were gendered, how the implementation of the plus component influenced gender-equality outcomes and how contextual factors moderated programme impacts.

2. Conceptual framework

The intervention uses an asset-strengthening framework inspired by the "capability approach" to development advocated by Amartya Sen (Sen, 1990). This approach envisions investment in individuals as a whole and emphasizes the importance of functioning ('doing' and 'being') over a simple assessment of commodities or happiness. In Sen's framework, development refers to an expansion of one's set of capabilities and thus new opportunities to choose or decide a different future. Many poor and vulnerable adolescents have limited options from which to choose and thus have limited "capabilities". The capabilities framework for adolescents developed by Gender and Adolescence Global Evidence (GAGE) defines the following domains: (1) education and learning, (2) bodily integrity, (3) physical and reproductive health and nutrition, (4) psychosocial well-being, (5) voice and agency, and (6) economic empowerment (GAGE Consortium, 2017). Measures assessed in the current evaluation are inspired by this capabilities approach, through which we aim to assess adolescents' assets across education, livelihoods (economic), SRH, bodily integrity, and voice and agency dimensions. However, we do not measure "capabilities" in the fullest sense, in that we do not assess agency and processes leading to adolescent outcomes.

By starting from this asset-strengthening framework, in the pilot intervention and evaluation, we recognize the multiple vulnerabilities and interlinking challenges faced by youth who experience poverty. Previous work has underscored how the poorest members of society face multiple constraints, which fundamentally alter their opportunities compared to individuals with more resources. This is sometimes referred to as the 'poverty trap', under which it is posited that poor people are forced to work in low-productivity jobs because of lower levels of initial wealth (and not due to individual traits such as talent or motivation), and thus they are unlikely to escape poverty (Balboni et al., 2022). Further compounding the poverty trap, it has been suggested that poverty has psychological consequences, including stress and negative affect such as unhappiness and anxiety, which may lead to short-sighted decision making and other behaviours that make it difficult to escape poverty (Haushofer and Fehr, 2014). Indeed, there is considerable persistence of poverty across generations, suggesting that social-protection programmes which aim to address poverty should include asset transfers (to address initial differences in wealth) and complementary programming – often referred to as 'integrated social protection'.

In this evaluation, we seek to understand how the Ujana Salama pilot intervention strengthened assets across multiple domains. The intervention and evaluation conceptual framework follows the Theory of Change (*see Figure 2.1*). The Theory of Change identifies outcome indicators in the short- and medium/long-term among youth and hypothesizes potential pathways of impact in a framework which links to the intervention components (cash, livelihoods training, and HIV/SRH education and linkages). The intervention aims to increase the economic capital of youth through the PSSN component (strengthening household economic security) and productive activities or investments for business youth via productive grants. It aims to improve

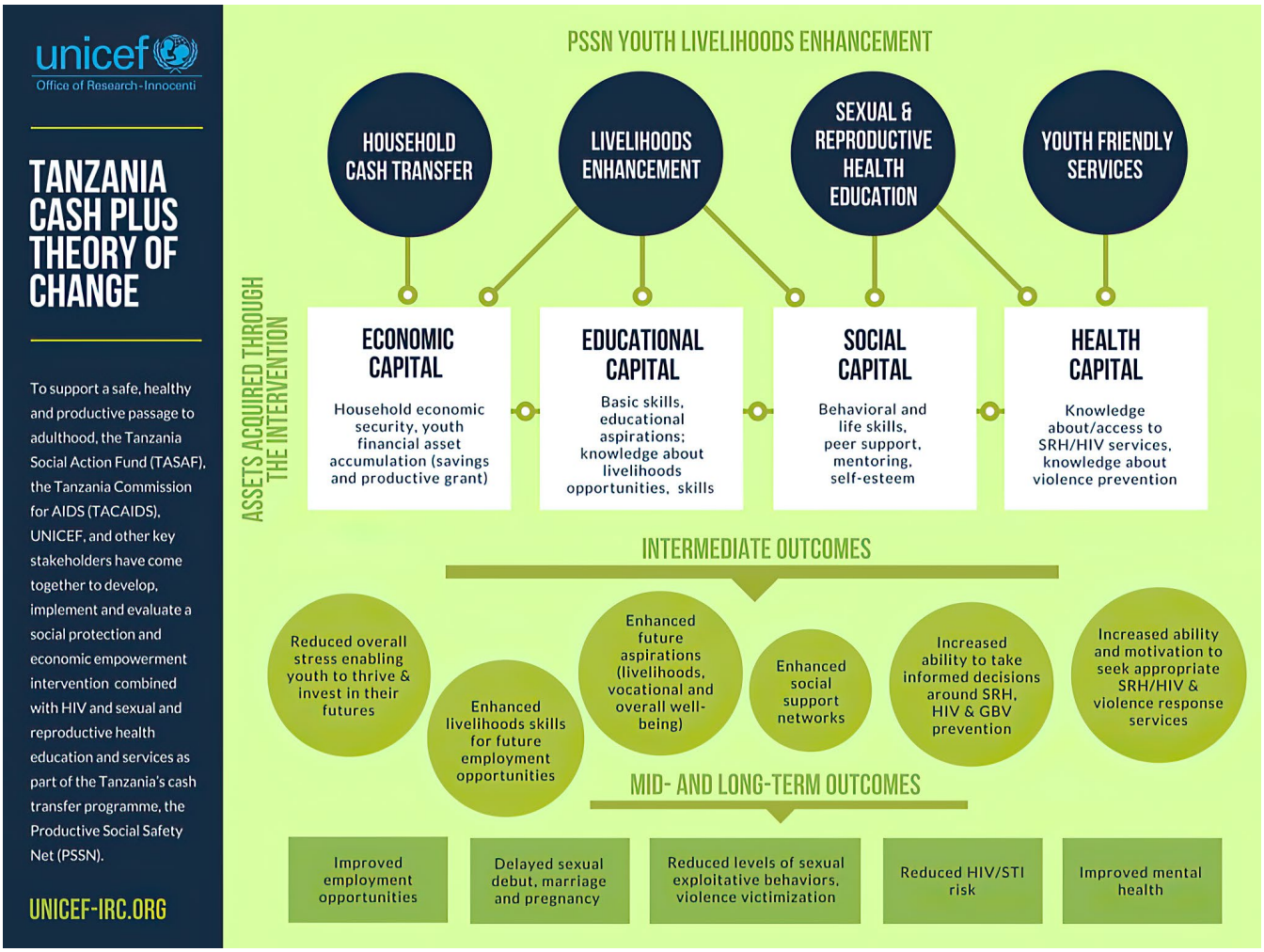
educational assets (through face-to-face training), educational aspirations, and schooling or vocational training (via productive grants). A further aim is to increase social capital (voice and agency) through education and coaching related to behavioural and life skills, peer support, self-esteem and mentoring related to future aspirations. Finally, it aims to improve health assets through educating people about SRH/HIV services and violence prevention, and access to these services.

Subsequently, in the short term, we hypothesize that the intervention may: improve adolescents' aspirations and/or skills related to livelihoods and economic opportunities (expanded capabilities); increase their knowledge and ability to make informed decisions around SRH, negotiate in sexual relationships and protect themselves from potentially abusive situations; and increase their ability to seek appropriate SRH/HIV and violence-response services. Improved future outlook and increased economic security may also reduce stress levels among youth and the rest of their households, which has implications for subsequent well-being.

Finally, in the mid and long term, the intervention (via the pathways and short-term outcomes outlined above), may: improve adolescents' future employment opportunities and income-generating ability; delay sexual debut, marriage and pregnancy; reduce engagement in exploitative sexual partnerships and HIV risk behaviours; improve mental health; reduce levels of violence victimization; and increase levels of health seeking for SRH/HIV services. These outcomes are measured through adolescent, household, community and health-facility questionnaires, which are described in more detail below. In view of the multidimensional types of support that were provided in the intervention, we measure a broad selection of outcomes that could potentially be affected through the intervention. However, we recognize that the programme will not affect all outcomes and power calculations to determine the sample size for the study were based on the outcomes of pregnancy, transactional sex, the first sexual intercourse being forced, physical violence and violence reporting among males and females combined. Sub-sample analyses by gender were post hoc and thus are presented in the appendices.

Overall, the objectives of the pilot intervention evaluated in this report are aligned with the Sustainable Development Goals (SDGs). For example, the objectives reflect: SDG 3 on good health and well-being (especially in relation to prevention of HIV/AIDS); SDG 5 on gender equality (including SDG 5.6 on ensuring universal access to SRH and reproductive rights, SDG 5.a on giving women equal rights to economic resources and SDG 5.c on strengthening sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls); SDG 8 in regard to providing decent employment opportunities for youth; SDG 16 on peace, justice and strong institutions (especially SGD 16.2 on ending abuse, exploitation, trafficking and all forms of violence against children).

Figure 2.1. Conceptual framework



3. Impact evaluation framework and sample

This section describes the overall design and sample selection for the impact evaluation.

3.1 Research questions

The overarching research question to be answered by the impact evaluation was how and to what extent a 'plus component' integrated in government structures within a cash-transfer programme can positively impact youth livelihood skills, well-being and the transition to adulthood.

Primary questions of interest in the overall evaluation (rounds one to three) included:

1. Do youth have increased livelihood knowledge and skills?
2. Are youth engaged in more productive, safer employment activities?
3. Do youth have increased knowledge about HIV prevention, HIV treatment and reproductive health services available to them?
4. Do youth access HIV testing, treatment, and reproductive health services at an increased rate?
5. Does the programme reduce violence and exploitation victimization and violence perpetration among youth?
6. Does the programme delay sexual debut, marriage and/or pregnancy?
7. Does the programme reduce health- and sexual-risk behaviours?

Secondary questions of interest of the overall evaluation (rounds one to three) included:

1. Does the programme increase gender-equitable attitudes?
2. Does the programme increase social assets?
3. Does the programme improve youth psychosocial well-being?
4. Through which pathways does the programme impact outcomes of interest?

The current report assesses whether impacts on these outcome areas were *sustained* after the end of the programme. It further aims to assess:

1. *How are the longer-term impacts of a plus component, implemented as part of a 'cash-plus' programme, targeted at adolescents gendered?* Specifically, how does cash-plus programming differentially affect males and females in regard to the longer-term impacts on livelihood activities, education, business start-ups, gender-equitable attitudes, mental health and use of youth-friendly services? Furthermore, how does the programme influence outcomes related to gendered vulnerabilities, whereby females tend to be at greater risk of adverse outcomes because of social and gender norms and existing economic structures? These outcomes include gender-based violence (GBV), exploitation, risky sexual behaviours, child marriage and family formation, and fertility.

2. *How are coping strategies in response to irregularities in cash-transfer payments between 2019 and 2020 gendered?* Namely, do payment delays lead households to disadvantage females to a greater extent than males, or vice versa? How do coping strategies and negative impacts vary by gender of the head of the household? This question is explored in more detail in a separate report (Zuilkowski et al., 2022), and we briefly summarize findings from that report in Section 14 of the current report.

3. *How has the implementation of the plus component influenced gender-equality outcomes?*

4. How do contextual factors (such as community social and gender norms, market availability, quality and distance to facilities) moderate programme impacts?

3.2 Study design

The evaluation uses a cluster randomized controlled trial (cRCT) study design and compares across study arms over time in order to assess whether the plus component improves the lives of youth (i.e., the treatment arm), compared to youth receiving cash only (i.e., the control arm).

For administrative purposes, TASAF refers to geographical areas of programme implementation as PAAs. On the mainland, these are the same as local government councils. Within PAAs there are wards, and within wards there are villages/*mtaas*.[8] The unit of sampling (also referred to as clusters) for the current cash-plus intervention and evaluation is the village. In this cRCT design, 130 clusters (villages) were randomized; households are nested within villages.

8 A mtaa is an administrative unit in an urban area that is equivalent to a village in a rural area.

The evaluation design has two study arms (randomized at the village (cluster) level), which allows us to estimate the impact of the combined livelihoods enhancement and SRH package on youth well-being among PSSN households. We conducted power calculations based on the primary outcomes of pregnancy, transactional sex, the first sexual intercourse being forced, physical violence and violence reporting.[9] Randomization of villages to study arms was conducted in July 2017, after implementation of the baseline surveys. Table B

While there may be synergies stemming from the combination of a cash-transfer programme and a plus component (the whole package is greater than the sum of its parts), the evaluation design does not allow us to evaluate the 'synergy' effect. Such a study design was not feasible as it would have required a significantly larger sample. Moreover, the cash component started much earlier than the 'plus' intervention (2015 or earlier vs. 2017). Thus, disentangling impacts of the cash component, the plus component and the combination of both is not possible in the current evaluation design. As such, findings presented in this report illustrate impacts of the 'plus component' among youth in households receiving government cash transfers as part of the PSSN.

The study participants included adolescents (both males and females) aged 14 to 19 years at baseline. At the time of the interviews in round four, participants were aged 18 to 24 years, so referred to as youth. The number of adolescents per village reached by the intervention varied, based on the adolescent population in PSSN households and programme-uptake rates. For the impact evaluation, we aimed to interview all eligible youth in each village (65 villages per study arm) in an intention-to-treat (ITT) design (*see Figure 3.1*). The baseline sample size for the impact evaluation totalled 2,458 interviewed youth across treatment and control arms (1,287 youth in Mufindi/Mafinga and 1,171 youth in Rungwe/Busokelo). In round two, 2,104 adolescents were re-interviewed, and in round three, 2,191 adolescents were re-interviewed. Subsequently, in round four, 2,053 youth (84 per cent of the baseline sample) in 1,916 households were re-interviewed (of which 45 per cent were female and 43 per cent were older than 20 years).

To assess programme impacts, four rounds of data collection were implemented:

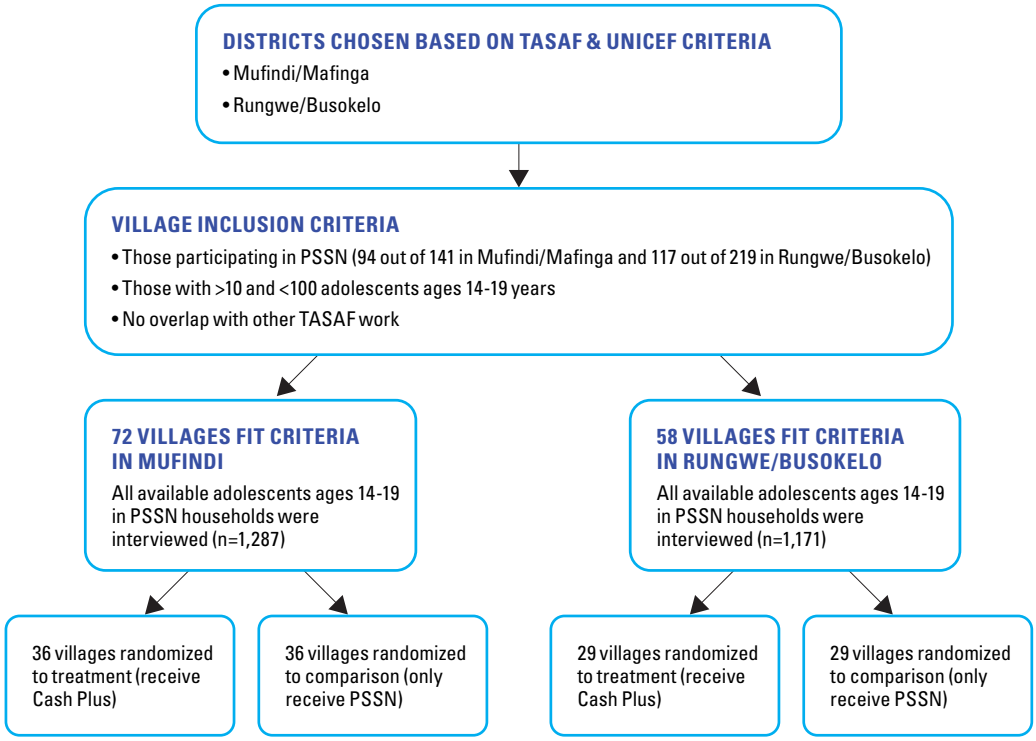
- baseline, pre-intervention implementation (April–June 2017)
- round two, six months after the intensive period of intervention (May–July 2018)
- round three, 18 months after the intensive period of intervention (June–August 2019)
- round four, 18–20 months after the end of the final intervention component (32 months after the intensive period of intervention; January–March 2021).

9 Intracluster correlation coefficients of 0–0.14 were calculated, based on data from a similar study in the United Republic of Tanzania among adolescents in comparable households. Using Stata power and sample size commands (sampsi), 65 equal clusters with 9 to 18 adolescents per cluster were required for a minimum detecTable Bffect size of a 5-percentage-point change for binary outcomes for a power of 0.80 with two-tailed $p < 0.05$.

Youth in both treatment and control villages were interviewed in all survey rounds in both study PAAs. The baseline surveys demonstrated that youth in the two study arms were similar at baseline and that randomization was successful as there was baseline balance among the indicators. This gave us the confidence to attribute observed differences to the impacts of the intervention in follow-up rounds. In this way, follow-up surveys (rounds two to four) enabled us to assess changes over time and between the study arms that are attributable to the cash-plus intervention.

In villages selected for the treatment arm, all youth aged 14–19 years living in PSSN households were offered the intervention. For the evaluation, we interviewed all available, eligible youth in each study village (in treatment and control study arms) for baseline and, in each follow-up round, we aimed to re-interview the same sample of adolescents. When offering a programme, it is not possible to predict which adolescents will choose to participate. Thus, for this impact evaluation, we interviewed all eligible adolescents in PSSN households and estimated the ITT impacts of the programme. This reflects the potential effectiveness of the programme were it to be upscaled to the population level since, in a fully upscaled programme, not all adolescents would choose to participate. Adolescents who participate in the programme and those who do not may differ in terms of both observed (age, marital status, etc.) and unobserved (cognition, motivation, etc.) characteristics. Thus, estimating impacts based on only those who participate in the programme could lead to misleading impact estimates in terms of what we would expect to see at the population level in an upscaled programme.

Figure 3.1. Community selection



3.3 Randomization

Randomization into study arms was stratified by PAA and village size (large vs. small). After baseline data were collected, we added up the number of eligible adolescents by village in each PAA and calculated PAA-level medians (in Mufindi/Mafinga, half of villages had 20.5 adolescents or less and in Rungwe/Busokelo half of villages had 22 adolescents or less). Then, we classified villages with totals below the PAA median as 'small' and those with totals equal to or above the median as 'large'.To facilitate buy-in from district government and stakeholders and to promote transparency, we held public randomization events to select villages for the treatment. These events took place in July 2017 (3 July in Mufindi and 5 July in Rungwe) after baseline data collection had been completed, and they were led by UNICEF Innocenti. The event participants included district and ward officials and TASAF staff and were conducted separately in each PAA. Thirty-three participants were involved in the event in Rungwe (representing Rungwe/Busokelo) and 39 in Mufindi (representing Mufindi/Mafinga).

Randomization events were conducted in each PAA separately, as follows. First, a presentation was given on the intervention, study and motivation for randomization. District participants were then given the opportunity to ask questions. Village names were divided into two hats (one for small villages, one for large villages). Then, an official randomly picked names out of each hat, a second official read the names out and the UNICEF researcher recorded the names in the order selected. After all village names had been picked, the lists were read aloud from the top (categorized as 'heads')

and bottom (categorized as 'tails'). Finally, a coin toss was conducted to determine which group (heads or tails) would receive the cash-plus intervention.

3.4 Study Questionnaires

Four types of questionnaire were implemented in all survey rounds, comprising:

1. household surveys with heads of households or caregivers
2. youth surveys (quantitative and qualitative)
3. health-facility surveys
4. community surveys.

In round four, we also carried out:

1. qualitative interviews with a subset of heads of households or caregivers
2. qualitative interviews with mentors
3. qualitative interviews and focus groups with trainers of trainers
4. qualitative interviews with healthcare providers
5. key informant interviews with stakeholders from TASAF, UNICEF and TACAIDS.

Quantitative youth questionnaires covered multiple topics and were based on the programme's theory of change. Key outcomes measured included livelihoods skills and knowledge, economic activities, sexual debut, pregnancy, marriage, school attendance, aspirations, psychosocial well-being, violence victimization and perpetration, sexual exploitation, and health and sexual risk-taking behaviours. Furthermore, we collected data on potential moderators of programme impacts, including perceived social support. Whenever possible, survey items were pulled from existing national survey instruments such as the Violence Against Children[10] and Youth Survey, Demographic and Health Surveys[11], and the World Health Organization (WHO) Multi-Country Study on Domestic Violence and Women's Health.[12] Similar surveys have been previously implemented in the United Republic of Tanzania and throughout Eastern and Southern Africa by the Transfer Project.

10 See, for instance Cravero et al. (2022).
11 The DHS Program website. Funded by USAID, <http://www.dhsprogram.com>, accessed 26 March 2023.
12 See World Health Organization (2005).

Semi-structured (qualitative) interviews were conducted with a subsample of 32 youths to explore mechanisms and pathways for impacts on outcomes of interest (the qualitative sample is embedded in the longitudinal quantitative sample). At baseline, qualitative-interview participants were selected prior to randomization and thus included both treatment and control groups. These youth were prioritized for follow-up in rounds two and three. Qualitative-interview participants in round four were selected from the treatment group (in an effort to focus on pathways of impact), based on a vulnerability assessment of quantitative data from round three. For two thirds of the qualitative sample, we used a purposive sampling approach and prioritized youth who had experienced one or more of the following: violence, pregnancy, transactional sex and poor mental health. The interviews were conducted in Swahili, digitally recorded, transcribed and translated into English.

Quantitative household surveys were administered to the heads of households or PSSN recipients to assess topics related to household composition, PSSN payments, savings, mobile-money access, food and water security, health-insurance coverage and household experience of shocks. Interviewers and participants were not matched by sex in household interviews because the interview topics were not considered sensitive.

Next, qualitative interviews were conducted with a subsample of 30 household respondents who were purposively selected to represent the geographic and demographic diversity of households participating in the study, including respondents from all four study districts and both treatment and control households. These qualitative-interview respondents were either PSSN beneficiaries or heads of households.

At the community level, data-collection supervisors administered a community questionnaire to a group of 'knowledgeable' individuals (e.g., teachers, village leaders) in each community to assess topics such as: access to markets, health facilities and schools; prices; village customs surrounding marriage (matrilineal, patrilineal, etc.) and caregiving (who would be expected to take a child in if the parent died); and shocks. The aim of the community surveys was to understand cultural norms and the availability of services to ultimately test for the possible moderating impacts of these community-level factors.

Qualitative interviews with 10 mentors (male and female) were conducted to understand how implementation of the intervention may have affected gender-equality outcomes. These mentors were purposively identified and selected by UNICEF. Interview topics included how training was conducted, the implications of mixed-gender training, how youth were guided after receiving the productive grant, drivers of choices around education, differences in impacts on SRH access by gender (despite joint training and mentorship) and opinions on the different ways in which males and females benefited from the intervention.

Health-facility quantitative surveys were administered at six different time points in order to assess the age and gender breakdown of access to HIV and SRH services.

Finally, qualitative interviews were conducted with 12 purposively selected healthcare providers (distributed across 3 one-to-one interviews and 3 focus groups with 3 health providers per group) to assess how the intervention may have affected males and females differently. These interviews were carried out in August and September 2021, after the main data collection. As a result of increasing concerns around COVID-19, these interviews were conducted via mobile phone (not in person) by a research team member from UNICEF Innocenti.

3.5 Data collection training and activities

Round four data collection training was carried out in January 2021, led by EDI Global with support from researchers at the University at Buffalo and UNICEF Innocenti. Table 3.1 shows a summary of the training components, including topics covered.

Table 3.1. Summary of data collection training activities

TRAINED STAFF	DATE	IMPLEMENTING AGENCIES	TOPICS
Supervisors (Eight supervisors, five male and three female)	7–8 January 2021	EDI Global coordination team (team leader, project coordinator and data processing officer)	• Introduction to the project, the community questionnaire (which supervisors were to administer) and the household and youth questionnaires. • Roles and responsibilities in overseeing teams, administration and finance, and quality-control activities. • Research ethics and the response plan for youth respondents.
Quantitative interviewers (51 trainees invited and 28 ultimately selected for the main fieldwork)	12–22 January 2021	EDI Global (with support from University at Buffalo and UNICEF Innocenti)	• In-depth training on the household and youth questionnaires, the response plan, and field protocols. • Pre-recorded videos on the study overview and research ethics led by University at Buffalo • Presentation on gender-based violence led by UNICEF Innocenti via videoconferencing. • Two days of outdoor practice on administering the household, youth and community tools.
Qualitative interviewers (four)	19–21 January 2021	UNICEF Innocenti	• Basics of qualitative interviewing technique and in-depth training on the interview tools and mock interviews • One day outdoor practice. • Transcription protocols, logistics and other administrative topics (led by EDI Global).
Health facility interviewers (three)	13–15 January 2021	EDI Global (with support from University at Buffalo and UNICEF Innocenti).	• Introduction to the project and facility questionnaire • One day outdoor practice

Household, youth (quantitative and qualitative) and community data collection was carried out by EDI Global between 25 January and 3 March 2021 using portable tablets and the computer-assisted personal interview software Surveybe. Health-facility interviews took place between 21 January and 18 February 2021.

3.6 Ethical guidelines and study registration

Ethics approval for the study was granted by the National Institute for Medical Research (NIMR/HQ/R.8c/Vol.I/1538) and the Tanzania Commission for Science and Technology. The study is also registered with the Pan African Clinical Trial Registry (PACTR201804003008116).

The research team adhered to the Ethical Principles and Guidelines for the Protection of Human Subjects of Research as outlined in the Belmont Report and United Nations Evaluation Group (UNEG) guidelines.[13,14] Interviewers received instruction on ethical data collection and informed consent during data-collection training. Informed consent was obtained from all individuals aged 18 years and above as well as married adolescents of any age. Caregiver/parental consent and adolescent assent was obtained for all unmarried adolescents aged below 18 years. English versions of consent forms are provided (*see supplementary online appendix A*), and these were translated into Swahili before being administered to participants. A split sample approach was used for administering modules on violence victimization, meaning that violence modules were administered in one village for females and in a second village for males. This approach served to protect the safety and confidentiality of respondents, eliminating the chance that both a male perpetrator and a female victim living in the same community were interviewed.

All informed consent included the ethical components regarding: (1) objectives and content of the study (without revealing to parents/caregivers the true nature of sensitive questions asked of youth), (2) privacy and data security, (3) voluntary participation, (4) the right to refuse to answer or skip any questions without consequence and (5) resources for making complaints or obtaining further information on the study. Quantitative interviews lasted an average of 58 minutes per youth. Interviewers and youth were matched according to their sex (e.g., male interviewers interviewed males and female interviewers interviewed females), and all interviews were conducted in private locations where other household members could not overhear the discussions. Interviewers used electronic tablets to input data, and questionnaires were administered in Swahili.

13 The Belmont Report on Ethical Principles and Guidelines for the Protection of Human Subjects (1974), <https://www.hhs.gov/ohrp/regulations-and-policy/belmont-report/index.html.

14 United Nations Evaluation Group, Norms and Standards for Evaluation, UNEG, New York, 2016, <http://www.unevaluation.org/document/detail/1914>.

Following WHO guidelines, we provided anonymized referral information to survey respondents who were asked questions on experiences of violence (Ellsberg and Heise, 2005). This referral information included contact numbers for district social-welfare officers. Social-welfare officers in the PAAs were contacted in advance to ensure they were aware of these referrals and to verify the services available. In total, 94.9 per cent of adolescent respondents in the violence subsample accepted the offer of information and were provided with referral contact numbers in round four. In addition, interviewers also offered youth the option of contacting appropriate social-welfare officers on their behalf if they either needed immediate assistance or did not feel comfortable keeping the referral information (anonymized phone numbers). During round four, none of the adolescents who were interviewed about experiences of violence chose this option. We also followed WHO guidelines for research on gender-based violence by training interviewers on this topic, conducting the interviews in a private setting and skipping violence-related questions if a private setting could not be ensured.

3.7 Data analysis

In order to quantitatively assess the impacts of the intervention, we used baseline and round four data from both treatment and control groups and compared changes over time between the two groups through analysis of covariance (ANCOVA). This report discusses impacts found (or not found) in round four, 18 months after the end of the cash-plus intervention. Reference to whether or not impacts are 'sustained' refers to whether or not they were found in round four. No (or null) impacts in round four means that treatment and control groups do not differ with respect to a specific outcome in this round. While impacts on this outcome may have been found in earlier rounds, no evidence of differences in round four indicates either that the programme never had an impact on this outcome or that impacts found in earlier waves were not sustained in round four. This approach is described in more detail below.

We define statistical significance at the 5 per cent level, that is a *p-value* lower than 0.05 ($p < 0.05$). If a programme impact estimate is statistically significant, we conclude that the intervention had an impact on this outcome. If impact estimates are not significant at this level, then we lack sufficient evidence to conclude that the programme caused changes with respect to this outcome. This may be due to a genuine lack of programme impact or insufficient sample size to detect changes attributable to the intervention. For example, as our study was powered to detect changes in the full sample (males and females combined), lack of significant impact estimates in subsamples by gender may be due to insufficient sample size. Therefore, we provide combined estimates in the main report tables and differences by gender in the appendices. The main report tables are complemented by descriptive information and graphs to illustrate age and gender differences in outcomes over time.

In the impact results presented in sections 7 to 13, column one reports ITT estimated effects, while column two reports average treatment effects on the treated (ATT) (*see Tables 7.1 to 13.4*). These different treatment impacts are described in more detail below.

Impact estimates are interpreted as follows:

1. For **binary outcomes** (e.g., owning livestock), impact estimates represent the average percentage point change in the probability that an outcome occurs that is attributable to the intervention. For example, as a result of the intervention, in round four, adolescents in the treatment group were 6.8 percentage points more likely to own livestock compared to adolescents in the control group. We discuss binary findings in two different ways but with the same meaning. For example, we may say that youth in cash-plus villages were 6.8 percentage points more likely to own livestock compared to youth in villages receiving cash only. Alternatively, we may say that the cash-plus intervention increased the probability that youth own livestock by 6.8 percentage points.

2. For **continuous outcomes** (e.g., hours spent on economic activities), impact estimates represent the average change in the outcome attributable to the programme. For example, the cash-plus intervention increased hours spent on economic activities by an average of 2.8 hours. Another way to say this is that the treatment group spent 2.8 hours more, on average, on economic activities compared to the control group, and that this difference is a result of the intervention.

Furthermore, in our description of results, we refer in the text below to 'baseline balance' among the panel sample and 'attrition'. Statistically significant differences in outcomes between study arms at baseline indicate that the sample is not 'balanced' on that outcome. Thus we cannot say, with any degree of certainty, whether the differences observed in follow-up rounds in regard to that same outcome are attributable to the intervention or to systematic differences that already existed at baseline between treatment and control groups.

'Attrition' refers to some individuals not being interviewed at follow-up and thus they were 'attrited'. Expressed more simply, they were lost to follow-up. This is expected in any longitudinal study because people may move, die or be unavailable for interview. Two types of attrition are of concern for longitudinal studies: overall and differential. Overall attrition represents the total share of individuals lost between baseline and follow-up, regardless of treatment status. This can lead to less accurate and less representative estimates but does not threaten the internal validity of the study (i.e., in our case, the ability to attribute differences in impacts of the intervention between study arms in round four). In contrast, differential attrition occurs when the characteristics of the individuals who leave the sample are different between the treatment group and the control group. This threatens the internal validity of the study because it can eliminate the balance between treatment and control groups that was present at baseline. The attrition analysis is reported in section 4 below (*see also Appendix B*).

In the description of findings, the term 'pooled' refers to analyses conducted on males and females combined and are the main findings reported (tables in sections 7 to 13). We also refer to gender-stratified analyses conducted among males and females separately (*see Appendix C*).

To further explore our findings and pathways of impact, we conduct complementary, qualitative analysis, also described in more detail below.

3.7.1 Quantitative analysis methodology

We used an ANCOVA specification, where cash-plus impacts are estimated as a function of the treatment indicator and of a set of control variables, including the baseline value of the considered outcome. ANCOVA is a more efficient estimation method compared to difference in differences (DD) when the correlation between outcome values at baseline and follow-up is low.[15] Within the set of outcomes measured both at baseline and in round four, 91 per cent have an autocorrelation below or equal to 0.2, which can be used as a threshold to define low autocorrelation (McKenzie, 2012). Autocorrelation of outcomes in the current sample ranges from -0.038 (for the indicator 'Last sex partner 10 years or more older than respondent') to 0.35 ('Last sex partner 5 years or more older than respondent').

We estimated the following model:

$$Y_{1ij} = \alpha_0 + \alpha_1 T_j + \alpha_2 Y_{0ij} + \alpha_3 X_{ij} + \varepsilon_{ij} \quad (1)$$

Where Y_{1ij} is the round four value of the considered outcome for adolescent *i* living in community *j*. T_j is a binary variable equal to one if the youth lived in a community where the cash-plus programme was implemented (treatment group), and zero if the youth lived in a community receiving cash only (control group). Y_{0ij} is a variable measuring the baseline value of the considered outcome, while X_{ij} is a vector of controls including gender, age at baseline and PAA × size fixed effects. Finally, ε_{ij} is the error term. The estimated coefficient of interest is $\hat{\alpha}_1$, which measures the impact of the cash-plus programme on the outcome of interest. In equation (1), the variable T_j is equal to one for all youth living in a treatment village, even if an individual youth did not receive the cash-plus intervention. Hence, this equation estimates ITT impacts.

We estimated the above model for the panel of youth who were interviewed both at baseline and during round four. If the outcome of interest was only collected in round four, we used equation (1), but without controlling for the baseline value of the outcome (referred to as 'single difference' models in the results described throughout

15 Difference-in-differences (DD) models compare changes in the treatment group between baseline and follow-up to changes in the control group over the same period (the control group enables us to single out changes due to confounding factors, such as weather shocks, thus making it possible to isolate the impact of the intervention). DD models fully control for baseline differences in the average value of the outcome variable between the treatment and the control group, which is inefficient when baseline outcomes have little predictive power on outcomes at follow-up (low correlation of outcomes at baseline and follow-up).

the report). In all our regressions, standard errors were adjusted for clustering at the community (village) level. This was done in recognition of the fact that outcomes may be correlated at the village level, which may lead to biased estimation of standard errors (and hence conclusions about statistical significance of impacts) without appropriate adjustment.

ITT regressions are estimated both for the pooled sample of males and females and for two separate subsamples by gender.

We also estimated the impact of participating in the cash-plus programme (ATT). Training was the main component of the cash-plus programme and only youth who attended training qualified for the mentoring and grant components. Therefore, when estimating ATT impacts, we focus on whether youth attended the cash-plus training. The decision to attend the training may be related to unobservable youth characteristics, which may also influence the outcome of interest. Hence, a simple specification using youth cash-plus attendance instead of the village-level treatment indicator in equation (1) would have provided biased impact estimates. For this reason, we assessed ATT impacts using an instrumental variable approach, where the endogenous cash-plus attendance variable is instrumented with the exogenous village-level treatment indicator.

We used the following Two-Stage Least Squares instrumental variable specification:

First stage: $$Attend\ cash\ plus_{ij} = \beta_0 + \beta_1 T_j + \beta_2 Y_{0ij} + \beta_3 X_{ij} + \varepsilon_{ij} \quad (2i)$$

Second stage: $$Y_{1ij} = \gamma_0 + \gamma_1 \widehat{Attend\ cash\ plus}_{ij} + \gamma_2 Y_{0ij} + \gamma_3 X_{ij} + \varepsilon_{ij} \quad (2ii)$$

Where $Attend\ cash\ plus_{ij}$ is a binary variable equal to one if the youth attended at least one cash-plus training session, and zero otherwise. In the first stage, this is estimated as a function of whether the youth lived in a cash-plus village (T_j). The predicted value from the first stage ($Attend\ cash\ plus_{ij}$) is then used in the second stage, in which the estimated coefficient $\hat{\gamma}_1$ measures the impact of attending the cash-plus training. While we obtained ATT impacts based on the training-attendance component, we noted that, by round four, some youth also received the mentorship and grant components. Hence, ATT impacts obtained in round four were likely to also capture the impact of these components, in addition to training.

We tested the robustness of our estimates using DD models and present the results (*see supplementary online appendix B*). DD results are largely consistent with the ANCOVA results included in this report. The main exceptions are for the few outcomes that were unbalanced at baseline. For these, DD estimates differ in some cases from ANCOVA estimates. We list these outcomes in Section 4, and we comment on DD impacts on these outcomes in the results sections.

We also present findings from analyses adjusted for multiple hypothesis testing (*see Appendix D*). This was done to account for the possibility of finding false positives when testing for programme impacts on many different outcomes. Under traditional statistical analyses, there is always a possibility of a Type 1 error, which refers to rejecting the null hypothesis when it is true (i.e., concluding there is a programme impact when there is none). The probability of a Type 1 error is the significance of the test of the hypothesis; in our study this is set at .05 (referred to as 'alpha'). This is the false positive rate. At .05, this means that if we test 20 outcomes, we expect at least one to be statistically significant, due to chance. Therefore, if we test many outcomes (as we have done in the current study), then we may expect a few will be significant due to chance. Additionally, under traditional statistical analyses, there is a possibility of a Type 2 error, which is when one fails to reject the null hypothesis when the alternative hypothesis is true. In impact evaluation, this means that one would conclude that there are no programme impacts when there are and the probability is referred to as the false negative rate. It is impossible to know which impacts are significant due to chance rather than real programme impacts. To help mitigate this we can: (1) guide our interpretation of findings based on the conceptual framework to assess if the outcomes we find significant impacts for are those most closely linked to the intervention, and (2) conduct multiple hypothesis testing corrections. For (2), we adjusted the *p-value* threshold to make it harder to reject the null hypothesis. This is not ideal, as our study was powered with alpha = .05 (for the pooled sample of males and females), based on the primary outcomes of pregnancy, transactional sex, the first sexual intercourse being forced, physical violence and violence reporting. Thus, this correction decreases the probability of a Type 1 error, but it increases the probability of a Type 2 error. That is, the correction increases the probability that we might conclude there are no programme impacts when there are. We opted to conduct Benjamini-Hochberg corrections for key outcomes across each area examined in this report. We have not run multiple hypothesis testing for secondary outcomes as the study was not powered on these and they are not our main focus. We report findings from these corrections (*see Appendix D*).

3.7.2 Qualitative analysis methodology

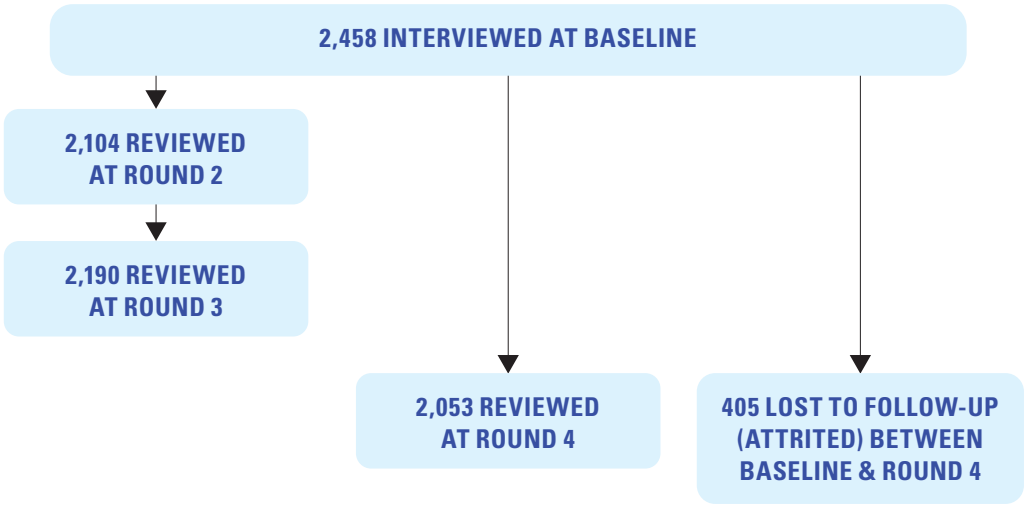
Qualitative analysis was conducted in two phases: (1) rapid initial analysis to document observations during fieldwork and (2) in-depth analysis to increase overall understanding of participants' lives and the transition to adulthood. All interviews were audio-recorded and transcribed in Swahili before being translated into English. The research team checked the validity of the English translations to ensure Swahili nuances were captured. Transcripts were analysed using the MAXQDA software programme (MAXQDA 11 – Software for Qualitative Data Analysis 1989–2016). A codebook was created using a priori themes from the interview guides and this was supplemented with themes that emerged during data analysis (Denzin and Lincoln, 2011; MacQueen et al., 1998). Initial coding structures were developed by the research coordinator and then, along with interview transcripts, shared with the two other coders for recoding. In this way, the final coding structure was validated, ensuring consistency in the application of codes (MacQueen et al., 1998).

4. Attrition

Attrition occurs when youth from the baseline sample are missing in the follow-up sample. At baseline, 2,458 youth were interviewed (Tanzania Adolescent Cash Plus Evaluation Team, 2018). A total of 2,053 youth interviewed at baseline were re-interviewed in round four, representing a re-interview rate of almost 84 per cent (*see Figure 4.1*). The impact analysis findings in this report are drawn from data from those adolescents who were interviewed at both baseline and in round four, also referred to as the 'panel sample'. Our attrition rate is in line with other longitudinal studies of adolescents in Eastern and Southern Africa (Austrian et al., 2018; Bandiera et al., 2019).

The attrition rate does not differ significantly between treatment and control villages, as we explain in more detail below. Moreover, in the panel sample the vast majority of baseline youth characteristics remain balanced in treatment versus control villages. Therefore, we are confident that estimated impacts accurately reflect the effects of the cash-plus programme.

Figure 4.1. Youth sample by response status in round four



In the remainder of this section, we explain the eligibility and tracking criteria for round four and outline the main reasons for attrition. Following the approach used in round three, only youth who had been interviewed at baseline were eligible for interview in round four. If a youth was no longer considered a member of the baseline household,[16] the baseline household would be invited to participate in a short interview and the youth was then tracked to her or his new household, where the household survey was conducted in full.

Out of the 405 youth who were not re-interviewed in round four, 55 per cent were reported as still living in the same household but temporarily away, 29 per cent were living in a different household and the remainder were either deceased or their households were not traceable (*see Table 4.1*). Among youth with known reasons for attrition, 27 per cent had left the household for work – either temporarily (16.5 per cent) or permanently (10.6 per cent) – and nearly 17 per cent were temporarily away visiting relatives. A smaller proportion of youth had moved out of the household for other reasons (including setting up a new household or as a result of the break-up of a household, or marriage or cohabitation) or for unknown reasons.

Table 4.1. Reason not interviewed.

	N	PERCENTAGE
Temporarily away: visiting relatives/friends	68	16.79
Temporarily away: work	67	16.54
Temporarily away: school	32	7.90
Temporarily away: other	37	9.14
Temporarily away: unknown	20	4.94
Moved out of household: work	43	10.62
Moved out of household: school	3	0.74
Moved out of household: marriage/cohabitation	15	3.70
Moved out of household: other	35	8.64
Moved out of household: unknown	23	5.68
Household not found	59	14.57
Deceased	3	0.74
Total	**405**	**100.00**

Next, we describe in detail the analysis we conducted to test for differential attrition. In our study, the overall attrition from baseline to round four is 16 per cent (for round three, it was 11 per cent). If youth from control and treatment villages attrite at different

16 A household member is defined as someone who normally lives and eats their meals with the other people in a certain household. A youth was considered to no longer be part of the household if she or he had been absent for six months or more. The baseline household is defined as the place that the head of household was living at baseline.

rates, the balance in baseline characteristics between study arms could be eliminated. This differential attrition implies that differences in youth outcomes between study arms at follow-up cannot be attributed with certainty to the intervention, as they may be due to systematic differences already present at baseline. We tested whether attrition differs between treatment and control villages by running a simple cross-sectional regression, with an indicator for youth lost to follow-up as a dependent variable and the treatment as an independent variable. A significant coefficient on the treatment variable in this regression would provide evidence of differential attrition by treatment status.[17] However, this is not the case in our sample (*see Table B.1, Appendix B*). Thus, internal validity of the impact evaluation is maintained.

We also examine differential attrition by background characteristics of the sample. Tables B.2-B.8 in Appendix B provide this analysis for baseline household-level characteristics. To do this, we ran similar regressions as above, using the treatment dummy variable to predict each baseline characteristic among the panel sample (and the sample lost to follow-up). If the *p-value* of the treatment coefficient in column 6(3) was below 0.05, the panel sample (and the sample lost to follow-up) varied significantly by treatment status for the considered characteristic. We focus on describing any imbalances within the panel sample, that is, the sample used to obtain the impact estimates. Out of 83 indicators of household characteristics at baseline, seven indicators (8 per cent) varied significantly in treatment versus control villages within the panel sample. These were mostly household-wealth indicators and were unbalanced for the full baseline sample (see Tanzania Adolescent Cash Plus Evaluation Team, 2018). For example, within the panel sample, households in treatment villages had a significantly lower wealth index compared to households in control villages (*p-value* = 0.02) (*see Table B.5, Appendix B*). Therefore, any programme impact of the cash-plus initiative may be underestimated and can thus be considered a lower bound.

We provide similar analysis for baseline youth-level variables (*see Tables B.9–B.12, Appendix B*). Finally, we report on the attrition of outcome variables (*see Tables B.13–B.30, Appendix B*). Of the 95 outcomes measured at both baseline and in round four, seven outcomes (7 per cent) vary significantly within the panel sample in treatment villages compared to control villages. Of these, three indicators were unbalanced in the full baseline sample (ever had a spouse or cohabiting partner; single/never married; participated in TASAF Public Works Programme). The remaining four indicators were balanced in the full baseline sample, but are unbalanced in the round four panel sample, thus showing evidence of differential attrition (experienced emotional abuse; taking care of children, cooking or cleaning; used condom during the most recent sexual intercourse; hours spent on TASAF public works). For the indicators that vary significantly at baseline within the panel sample between treatment and control villages, we also comment on results from DD models.

17 In these regressions, we controlled for PAA × size fixed effects and clustered the standard errors at the community level.

In order to assess sustainability of impacts in round four in relation to those in round three, the attrition analysis further included examining whether round three characteristics were similar between youth who were interviewed in round four and those who attrited between round three and round four. This analysis was conducted separately for treatment and control villages for the main outcomes (*see Table B.31, Appendix B*). For four out of 44 indicators, round three values differed significantly between the panel sample and those who had attrited, either within the control or within the treatment group. The four indicators were: participated in livestock herding for the household during the week before the interview; currently doing business; ever visited a health facility for SRH services; and experienced emotional or physical IPV. While this does not invalidate our results, this information is useful in providing a more accurate interpretation of them. For each of these outcomes, comments are included where relevant in the corresponding results sections (see sections 7, 12, and 13).

5. Implementation and compliance

Given that all the intervention components (face-to-face training, mentoring phase and strengthening of health facilities) had been implemented before the round three data collection, there were no new components to analyse in this report. However, at the time of the round-three data collection, eligible adolescents had just received the productive grants, and some were still waiting to receive the second tranche. Therefore, in the round-four questionnaire we asked again about productive-grant receipt, as well as introducing new questions on whether these grants helped adolescents to stay in school, engage in vocational education or start a business. This section describes this new information and provides statistics on the take-up of activities during previous rounds, using the panel sample of adolescents interviewed both at baseline and in round four.

Among those adolescents eligible for the treatment, 48.7 per cent attended at least one session of the livelihoods and SRH/HIV life-skills training (n = 482) (*see Table 5.1*). Training attendance was higher among females (54 per cent) than males (45 per cent). Among those who attended training, approximately 53 per cent continued to meet a mentor afterwards and approximately 69 per cent submitted an education or business plan. Most of the youth who submitted a plan chose a business plan over a schooling or vocational plan. Among those who submitted a business plan, about 59 per cent received both tranches of the grant, while 24 per cent received only one and the rest reported not receiving either of the two tranches. Most adolescents submitting an education-related plan chose a schooling plan over a vocational education plan. Moreover, almost 84 per cent of those submitting a schooling plan and 65 per cent of those submitting a vocational training plan reported having received the grant.

Table 5.1. Take-up of the intervention disaggregated by programme components

	N (%)	TOTAL
Eligible to participate	989 (48.2)	2,053
Attended training	482 (48.7)	989
Met mentor after training	255 (52.9)	482
Submitted a plan	332 (68.9)	482
• Submitted a business plan	251 (75.6)	332
• Submitted education plan (schooling)	61 (18.4)	332
• Submitted education plan (vocational)	20 (6.0)	332
AMONG THOSE SUBMITTING BUSINESS PLAN		
• Received grant (at least one tranche)	209 (83.3)	251
• Received grant (only first tranche)	61 (24.3)	251
• Received grant (both tranches)	148 (58.9)	251
AMONG THOSE SUBMITTING EDUCATIONAL PLAN (SCHOOLING)		
• Received grant	51 (83.6)	61
AMONG THOSE SUBMITTING EDUCATIONAL PLAN (VOCATIONAL)		
• Received grant	13 (65.0)	20

Note: The table refers to the panel sample of youth interviewed in all four rounds (n = 2,053).

Next, we examine how youth spent the productive grant. It is important to note that round four was implemented more than 18 months after the productive grants were received. As youth had the opportunity to complete schooling or training during this time, we expected that most of them would not still be in school or training by round four. Out of all adolescents who received the productive grant for business, about 49 per cent spent it on business-related costs, and for around half of them the business was still in operation (*see Table 5.2*). Moreover, about 57 per cent of adolescents receiving the schooling grant were still attending school in round four, and 75 per cent of them reported being able to stay in school because of the grant. Among those who left school, 50 per cent (n = 11) completed the grade they wanted or expected, 36 per cent (n = 8) could not afford schooling despite the grant, 4.6 per cent (n = 1) started working, and 9 per cent (n = 2) got married.[18]

Meanwhile, only 15.4 per cent (n = 2) of the 13 participants who submitted the vocational education plan and received the grant were still attending vocational training by round four. Four adolescents who were not currently attending vocational training had already completed the level they wanted or expected to achieve, while a further five participants said they could not afford vocational education despite the grant, one participant had started working, and another one did not report reason why. Among those who had received a grant for vocational training but who were not still attending vocational training by round four, 9 (82 per cent) achieved vocational and crafts level and two achieved technician training level.

18 Additional information on how youth spent the productive grant is provided in the round three report (see Tanzania Adolescent Cash Plus Evaluation Team, 2020).

Table 5.2. Use of grants and descriptive outcomes

	N (%)	TOTAL
YOUTH WHO SUBMITTED A BUSINESS PLAN AND RECEIVED AT LEAST ONE TRANCHE OF THE GRANT		
• Used the grant to start a business	102 (48.8)	209
• The business is still in operation	55 (53.9)	102
YOUTH WHO SUBMITTED A SCHOOLING PLAN AND RECEIVED THE GRANT		
• Attending school or completed the amount desired	40 (78.4)	51
• Currently attending school	29 (56.8)	51
• Stayed in school because of the grant	38 (74.5)	51
YOUTH WHO SUBMITTED A VOCATIONAL EDUCATION PLAN AND RECEIVED THE GRANT		
• Currently attending or completed desired amount of training	6 (46.2)	13
• Currently attending vocational training	2 (15.4)	13
HIGHEST LEVEL ACHIEVED		
• Vocational and crafts	81.8	11
• Technician training	18.2	11

Note: The table refers to the panel sample of youth interviewed in all four rounds who received the productive grant for business (n = 209), schooling (n = 51) or vocational training (n = 13).

6. Health facilities

Background and key findings

Facility characteristics and adolescent-friendly services

- This section provides contextual, descriptive information about the healthcare services available to youth in the study areas and conducts a descriptive trends analysis of the provision of adolescent-friendly health services. Results in this section should not be interpreted as causal impacts of the pilot, as the study design did not allow for the identification of such effects.
- Six rounds of data collection for health facilities (referred to as HF rounds) were collected between February 2017 and April 2021, and adolescent-friendly health-facility strengthening training was implemented at primary health facilities serving cash-plus communities in July 2018.
- It is important to consider the context of the COVID-19 pandemic when interpreting findings related to health services. The pandemic increased patient load while, simultaneously, leading to many drugs being out of stock as a result of global supply-chain issues.
- While provision of services was not under the control of the intervention, we provide this information to: (1) contextualize results in relation to the availability of services in the study areas and (2) to understand trends after strengthening activities were performed in July 2018.
- The provision of adolescent-friendly services generally improved over the course of the pilot, especially after the one-off health-facility strengthening training in July 2018; however, many challenges were visible during round six, which was conducted during the COVID-19 pandemic.
- Approximately half of the facilities had current staff trained in youth-friendly HIV/SRH services. There was a notable increase in the percentage of facilities that had trained staff in GBV services between the start of the health-facility strengthening activities and approximately one year later (from 34 per cent in July 2018 to 43 per cent September 2019); however, the percentage dropped back to 34 per cent by HF round six (in 2021). Fifty-four per cent of facilities implemented changes in adolescent-friendly services over the study period.
- There were improvements in other adolescent-friendly characteristics prior to COVID-19, including having a referral system in place for adolescents and having regular supervisory visits from the Ministry of Health or similar trainers.
- Inclusion for adolescents improved throughout the study. The proportion of facilities offering HIV treatment to all youth (both married and unmarried) more than doubled after the start of health-facility strengthening activities — rising from 40 per cent in November 2018 to 89 per cent in January 2021. At the end of the study almost all facilities provided contraceptive and HIV-testing services for all youth, and 85 per cent of facilities offered reduced-cost or free services for youth who could not afford the full price.

Services and supplies

- The percentage of health facilities offering outreach and HIV-treatment services to adolescents increased over the study period.
- The services that experienced an increase in the number of hours they were open to adolescents included outpatient consultations, GBV services and postnatal care. Some services (antenatal clinics, HIV treatment and prevention of mother to child transmission (PMTCT)) saw reductions in January 2021, compared to the previous round, which may have been attributable to the COVID-19 pandemic.
- There were increases in the supply of modern contraceptives throughout the study, prior to the COVID-19 epidemic

This section describes the characteristics of governmental health centres/dispensaries serving the study communities at six time points (referred to as HF rounds). Four out of the six HF rounds were conducted more or less simultaneously with the household surveys, while two of the HF rounds were conducted independently (*see Table 6.1*). The aim of these surveys was: (1) to provide contextual, descriptive information about the healthcare services available to youth in the study areas and (2) to conduct a descriptive trends analysis of the provision of adolescent-friendly health services over the study period, including after the health-services strengthening training conducted in July 2018. By collecting data on health facilities, we also captured characteristics that can act as important moderators of programme impacts. For example, the programme may have stronger impacts on SRH use by adolescents in locations where facilities had more services or personnel or were more adolescent friendly.

It is important to keep in mind the context of the COVID-19 pandemic when interpreting these findings related to health services. The pandemic caused increase patient load and, simultaneously, many drugs were in short supply globally as a result of supply-chain issues. Thus, trends over time may reflect the broader context rather than the performance of the health-strengthening component of this intervention.

We conducted frequent surveys for the first five time points (over 29 months) and collected the final data 30 months after baseline. Health-facility surveys were conducted more frequently than the overall evaluation rounds, thus the rounds referenced in this section do not correspond to survey rounds conducted with youth, households and communities. Enumerators implemented health-facility questionnaires to all government-run primary health facilities in the study region. Information was collected on facility characteristics, equipment, adolescent-friendly services, drugs and medical supplies, and personnel.

Data were collected from governmental primary health facilities in 69 villages within the study areas. Data were initially collected from 91 health facilities, but by HF round three in July 2018, nine additional health facilities had been identified as serving the study population, resulting in a total of 100 health facilities for the remainder of the study.

The health-facility-level data analysis in this report is descriptive only and, in view of the study design, we cannot attribute changes reported here to intervention components such as the health-facility strengthening training conducted in July 2018. However, health-use data reported directly by adolescents and which we include in Section 12 allows for the estimation of causal impacts.

6.1 Data collection

The first round of the health-facility survey (HF round one) was conducted alongside the baseline data collection for the other survey instruments (household, youth, community and qualitative) and involved 102 health facilities. Ninety-one of the 102 health facilities surveyed were deemed to serve villages in the study sample and were included in the baseline report (*see Table 6.1*). These same 91 facilities were re-interviewed for HF round two. Prior to HF round-three data collection, an additional nine health facilities were identified by UNICEF Tanzania as potentially servicing cash-plus communities; thus, HF rounds three to six included 100 health facilities.

Table 6.1. Health-facility (HF) data-collection summary

ROUND	STUDY FACILITIES SURVEYED (N)	DATES OF DATA COLLECTION	MORE OR LESS SIMULTANEOUS WITH HOUSEHOLD SURVEYS
HF one	91	22 April–29 May 2017	✓
HF two	91	20 February–16 March 2018	
HF three	100	17 July–7 August 2018	✓
HF four	100	28 November–18 December 2018	
HF five	100	17 September–5 October 2019	✓
HF six	100	21 January–18 February, 2021	✓

HF round four occurred just after adolescent-friendly health-facility training (July 2018), conducted by the Ministry of Health, Community Development, Gender, Elderly and Children, with technical assistance from UNICEF. Thus, we may expect to see improvements related to these outcomes in later rounds.

The additional nine health facilities added in HF rounds three to six are excluded from the analysis of trends (in facility characteristics, surgical services, drugs and supplies, and personnel). They were, however, included in indicators when the survey instrument changed, which resulted in a lack of comparability (in adolescent-friendly environment/staff, services available to adolescents and use of services by youth) between rounds. In the latter case, we present findings from HF rounds three to six for these outcomes.

6.2 Facility characteristics

In these surveys, we asked about adolescent-friendly services (*see Table 6.2*). Due to changes in the survey and the way in which questions were asked, we show results from HF rounds three to six only. About half of the facilities had current staff trained in youth-friendly HIV/SRH services across the three rounds. This likely reflects that intervention-related trainings in July 2018 reiterated and strengthened knowledge and attitudes related to adolescent-friendly services, but that staff had previous exposure to the concept of adolescent-friendly services. There was a notable increase in the percentage of facilities having trained staff in GBV services between HF round three (34 per cent) and HF round five (43 per cent); however, this dropped back to 34 per cent at HF round six. There was also a notable increase in the percentage of health facilities providing HIV-treatment services to all youth (married and unmarried) between HF round four (40 per cent) and HF round six (89 per cent) (*see Table 6.2*).

Table 6.2. Adolescent-friendly characteristics (HF rounds three to six; n = 100; proportions)

	ROUND THREE	ROUND FOUR	ROUND FIVE	ROUND SIX
ADOLESCENT-FRIENDLY TRAINED STAFF				
HIV services	0.52	0.51	0.55	0.52
Family planning	0.55	0.51	0.55	0.52
GBV services	0.34	0.27	0.43	0.34
ADOLESCENT-FRIENDLY DOCUMENTS				
Policies/guidelines/procedures	0.57	0.55	0.43	0.33
Materials for community	0.39	0.53	0.48	0.36
INCLUSION POLICIES				
Ability to pay	0.54	0.71	0.57	-
Reduced pricing**	-	-	-	0.85
Contraceptives for all youth	0.92	0.99	1.00	0.99
HIV-testing services for all youth***	1.00	1.00	1.00	1.00
HIV-treatment services for all youth	-	0.40	0.83	0.89

**In HF round six, the inclusion question on ability to pay was replaced with a question on whether the health facility provided reduced pricing for youth who were unable to pay for services.
***HF round three asked about testing and treatment in a single question but in HF rounds four to six they were asked about separately.

We also asked whether health facilities had documents containing policies, guidelines and management procedures in regard to adolescents or support materials to communicate with parents and other community members about the value of providing health services to adolescents (*see Table 6.2*). Between HF rounds three and six, there was a decrease in the percentage of facilities that had documents containing policies and guidelines (from 57 per cent to 33 per cent) and a smaller decrease in those that had support materials (from 39 per cent to 36 per cent).

In qualitative interviews, it was evident that attitudes towards interactions between providers and youth on SRH issues had improved over the course of the pilot intervention, and providers attributed this to the cash-plus program. These improved interactions were even happening beyond the facility premises. One of the providers interviewed explained how he had learned to respond as well as he could to youth when approached for advice. He said:

So, it is better [if a youth] confronts you [with a need] to respond encouragingly at that time and say "OK, come now", but if she/he tells you "I have a need" [and] you tell her/him "Come later" … ah, know that you have missed her/him because she/he may never come back for consultations. [Normally], they like to be attended to as soon as possible so if they see you, they know their problem will be attended to immediately, hence if you respond [promptly], you find many of them prefer coming to consult you, and whenever they see you they want to explain their problems to you (Key Informant Iinterview, Mufindi, 3 August 2021).

We also included questions on inclusion policies in quantitative questionnaires to determine whether facilities considered the ability to pay when treating adolescents, and if all adolescents, regardless of marital and child-bearing status, were given access to contraceptive and/or HIV services. Consideration of the ability to pay increased to 71 per cent in HF round four (from 54 per cent in HF round three) but declined to 57 per cent in HF round five (*see Table 6.2*). To better capture service availability for adolescents lacking resources, in HF round six, we replaced the ability to pay question with a question about whether facilities offered reduced-cost or free SRH services to youth who could not afford the full price. Eighty-five per cent of facilities reported reduced-cost or free services for youth who were unable to pay for HIV, contraceptive or prenatal services. While HIV testing and contraceptive services were offered consistently to nearly all youth throughout the study, access to HIV treatment services was not universal. At HF round four, only 40 per cent of health facilities offered HIV treatment to unmarried youth who were not pregnant or breast feeding. This increased to 83 per cent in HF round five and 89 per cent in HF round six.

In the qualitative interviews, payment for STI treatment was mentioned as a barrier to accessing care for adolescents/youth, especially for those from under-resourced households. This is not the case for HIV testing, which is provided for free. The following extract from the transcripts of interviews with providers refers to patients who are not enrolled in the Community Health Fund and who must, therefore, pay for themselves:

Respondent (R): Ahh, they do come here [the dispensary] but they often come without anything.

Interviewer (I): When you say they come without anything, what do you mean?

R: It means they come and tell me, but I do not have the capacity to assist them

because there is no free [treatment]. So, I send them back, requesting by all means [that they] inform [their] father, mother [or] anyone close so that they [can] assist. But if you say that to her/him, that means she/he disappears, never to come back again.

I: So, if a person seeks treatment for these infections, how much does she/he have to pay for a registration card?

R: Normally, on arrival she/he has to pay registration costs of TZS8,000 [approx. US$3.4]. Yes, registration so that she/he can have consultations with the doctor, she/he has to pay TZS 8,000. Now, after consultations, depending on the illness, the prescription could be pills or injections.

(Key Informant Inteview, Kyimo, Rungwe, 11 August 2021)

The cost of STI testing as a barrier to accessing healthcare was also mentioned by some youth. Responding to the question of whether youth are charged for HIV or sexually transmitted disease testing, one respondent replied, "Yes, they pay TZS5,000 [approx. US$2]"

(Interview with female, 17 years old, completed Form III[19] Village 1083, 25 January 2021).

Irrespective of these challenges, it was observed that the cash-plus intervention had generated greater confidence among youth to seek advice or consultations in health facilities or from service providers.

19 The schooling system in the United Republic of Tanzania includes seven years of primary schooling (Standard I to VII), four years of lower secondary schooling (Form I to IV), and two years of upper secondary schooling (Form V and VI). Primary schooling is compulsory and starts at the age of seven.

7. Schooling, livelihoods and food security

Key findings

Schooling

- There was an increase in school dropout rates in cash-plus villages in round three, which probably resulted from a combination of factors, including the business focus of the cash-plus training, as well as contextual conditions, such as financial barriers to education, lack of vocational training facilities available locally and (perceived) low returns to schooling.
- This unintended impact was no longer evident by round four, by which time most youth had left school permanently, in both treatment and control villages (the increase in school-dropout rates was not found in round two).
- As in all previous rounds, the cash-plus intervention did not have an impact on the highest grade of education completed by youth. Thus, adverse effects on school participation observed in round three did not translate into sustained, adverse effects on educational attainment.

Own business activity

- The cash-plus intervention had a sustained impact on youth micro-entrepreneurial activities. Similar to round three, youth in cash-plus villages were significantly more likely to be running a business than youth in the control group (at midline, no impacts were observed).
- Moreover, in round four, the intervention had positive impacts on revenues and profits (this was not observed in rounds two and three).

Other economic activities

- Although the intervention did not increase the likelihood of participating in at least one economic activity, it did lead to sustained increases in some specific activities such as livestock keeping and farm work for the household. Increases in livestock keeping were also observed in round three, while impacts on farm work were insignificant both at midline and in round three.
- In addition, qualitative interviews revealed a sustained impact on the reinforcement of linkages between youth and professionals or technical people in areas related to livelihood enhancement.
- As a result of a higher engagement in economic activities, exposure to hazards increased as a result of the intervention in round four (this was not observed in previous rounds). Youth engagement in household chores was not affected by the intervention, except for taking care of the sick and elderly, which increased among women in round four. The reasons for this increase could be the women's improved knowledge about illness and an increase in income following the intervention.

In recent years, a number of interventions that provide economic strengthening to adolescents have been implemented in Sub-Saharan Africa. They include programmes targeted at both those who are in school and those who are out of school, as well as initiatives targeted at out-of-school youth only. For example, a programme based on an asset-building framework in Uganda led to increased economic assets in the form of savings (Austrian and Muthengi, 2014). The Empowerment and Livelihood for Adolescents (ELA) programme, implemented by the NGO BRAC in the United Republic of Tanzania and Uganda, aimed to increase adolescent females' economic and social empowerment through life-skills and livelihoods training. It led to sizeable improvements in youth outcomes in Uganda, where the model increased participants' engagement in economic activities and entrepreneurial skills. These advances in economic empowerment were sustained four years post-intervention (Bandiera et al., 2019). However, in the United Republic of Tanzania, the ELA intervention did not have any protective impacts, probably due to differences in the quality of implementation as a result of resource constraints (Buehren et al., 2017). Despite the promising findings in Uganda, the majority of interventions related to adolescent empowerment have largely consisted of NGO-led or small-scale programmes which have not been upscaled subsequently.

This section describes programme impacts on adolescents' schooling, micro-entrepreneurial activities, participation and amount of time spent on economic activities and household chores.

7.1 Schooling

Although increasing school attendance and attainment was not a primary objective of the intervention, the cash-plus programme might have had an indirect impact on these outcomes. The mentoring and education grant were expected to encourage and facilitate school continuation for adolescents who would have otherwise dropped out for financial reasons or as a result of low motivation to stay in school. Potential improvement in SRH for girls might also have contributed to better schooling outcomes. However, other components of the cash-plus programme might have had the opposite effect. For example, the livelihoods training coupled with a general lack of economic opportunities for educated youth in the study areas might have led to adverse educational outcomes, driven by youth dropping out of school in search of more immediate entrepreneurial activities and other economic opportunities.

In round two, the cash-plus training did not have any statistically significant impacts on schooling outcomes. However, in round three (after the mentoring phase), we observed an increase in secondary school dropout. There were no impacts on educational attainment, defined as the highest grade of education completed. The round three report concluded that this adverse outcome probably resulted from a combination of factors, including the business focus of the training, as well as

contextual conditions, such as financial barriers to education, lack of vocational training facilities available locally and low perceived returns from education (Tanzania Adolescent Cash Plus Evaluation Team, 2020b). The combination of these factors may have led to some youth deciding to pursue business plans (in expectation of a productive grant to start a business) rather than continuing with education. In round four, it was important to understand whether the adverse outcome on school participation was sustained after two years and, most importantly, whether it led to lower educational attainment.[20]

The cash-plus intervention did not have an impact on any educational outcomes by round four (*see Table 7.1*). At baseline, the sample youth were an average of 16 years old, and approximately 54 per cent of them were attending (mostly secondary) school. Given that this sample had aged, attendance, not surprisingly, decreased among both treatment and control groups to 14.5 and 15.7 per cent, respectively. There were no significant differences between groups in attendance or dropout rates by round four. Our interpretation of this is that some youth dropped out earlier (by round three) in cash-plus villages and those in the control group dropped out later (by round four). Thus, ultimately, school participation evened out for treatment and control groups as youth grew older. We do not observe statistically significant differences in school attainment (highest grade completed) between the control and treatment groups (the highest grade completed was 8.5 on average among the control group and 8.2 on average among the treatment group). This shows that the increase in dropout observed in round three did not lead to cash-plus participants achieving lower levels of education on average. The conclusion that the intervention had no lasting, adverse impacts on school attainment was also supported by supplementary qualitative interviews conducted between rounds three and four, in which none of the youth who had dropped out of school mentioned the cash-plus initiative as a reason for dropout.

20 We analysed six educational outcomes: whether the youth currently attends school; whether the youth currently attends primary school; whether the youth currently attends secondary school; whether the youth dropped out of primary school, equal to one if the youth dropped out before completing primary school, or zero otherwise (for youth attending primary school at baseline only); whether the youth dropped out of secondary school, equal to one if the youth dropped out before completing Form IV (lower secondary), or zero otherwise (for youth attending secondary school at baseline only); and highest grade of education completed.

Table 7.1. Cash-plus intervention impacts on schooling

	ITT IMPACT	ATT IMPACT	BASELINE MEAN	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)
Currently attending school	-0.016	-0.041	0.543	0.157	0.145
	(0.02)	(0.04)			
Attending primary school	0.002	0.005	0.235	0.004	0.006
	(0.00)	(0.01)			
Attending secondary school	-0.020	-0.053	0.307	0.153	0.139
	(0.02)	(0.05)			
Highest grade of education completed	0.018	0.038	6.799	8.535	8.217
	(0.17)	(0.44)			
N	2,052	2,051	2,051	1,064	988
Dropped out of primary school	-0.001	-0.002		0.046	0.045
	(0.02)	(0.05)			
	483	483		239	244
Dropped out of secondary school	0.054	0.130		0.156	0.210
	(0.03)	(0.08)			
N	630	630		340	290

Notes: Linear models were estimated for the panel of youth interviewed at both baseline and round four. For school attendance and highest grade completed, regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. For school dropout, regressions control for gender, age at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01.

During qualitative interviews, a male mentor discussed some of the barriers faced by adolescents in the community:

R: Yes, one of the reasons is the distance from home to school. It is also [one] of the challenges. Another reason is lack of income [so] that a parent [is] not able to educate her or his child; I mean low income. Another reason is the challenges of clothes. For example, a boss's child dresses well and the [child] from the poor family does not dress well, so she or he decides to drop out of school due to the poor situation of her or his home. [She or he thinks], "When I look at my friends, [they] are dressed well [and] eat well, but, for me, I sleep hungry." So that can be a reason which might be part of the challenge too.

(Mufindi male mentor, Kiponda, 26 October 2020)

At youth-level, barriers to continuing education included lack of proper advice, which led to youth being more inclined to pursue other activities:

I: How are the decisions made at home when it comes to schooling? Who decides on school matters?

R: It's just the direction; you see, yourself, what the direction is.

I: Are you looking for direction?

R: You find it has reached a stage where there is no direction, that even if you look at this side there is no… ; this side is not there; now you just have to stay home because there is no way to do it.

(Interview with female, 18 years old, completed Form IV, single, Village 2321, 5 February 2021)

We did not find any statistically significant impacts when examining outcomes for males and females separately (*see Table C.7.1, Appendix C*). Moreover, there is no evidence of baseline imbalances for schooling variables, as baseline educational outcomes are not significantly different between treatment and control groups (*see Table B.13, Appendix B*). DD models confirm the findings summarized above. This robustness test is particularly relevant because schooling outcomes are highly correlated over time, which makes DD a more appropriate estimation strategy than ANCOVA (*see Section 3.7.1*).

7.2 Own business activity

The cash-plus programme included multiple elements of economic empowerment. The training sessions helped youth to identify viable livelihood opportunities and role models who could support them in these endeavours. The mentoring phase included elements of livelihood support, especially for older youth, and linkages to extension services. Finally, youth who submitted a business or education plan were given a productive grant to support the realization of their business or training, with spending patterns being monitored by mentors.

By round two, immediately after the training, the intervention increased business aspirations and entrepreneurial attitudes. By round three, we observed positive impacts on starting a business. This was consistent with the take-up data presented in Section 5, which showed that a higher percentage of youth chose a business plan over an education plan, and that business grants were used to start a business. Our findings are also consistent with recent findings on the impact of cash or in-kind grants on youth investment and earnings in other settings (Blattman et al., 2019).

We report on estimated impacts on youth micro-entrepreneurial activities (*see Table 7.2*).[21] At the time of the round-four interviews, the probability of youth doing business in cash-plus villages was almost double that of youth doing business in cash-only villages.

More than 14 per cent of youth in the treatment group were currently engaged in a micro-entrepreneurial activity, compared to 7.7 per cent in the control group; there was an increase of 6.8 percentage points (17.9 percentage points if estimates of actual participation (ATT) are considered) due to the intervention. The intervention also increased the probability of youth owning assets or livestock by 3.1 percentage points, although ownership was lower than 5 per cent overall (this percentage considers the whole sample and not only those who run a business).

The most common sectors of new micro-entrepreneurial activity were 'petty trading' (25 per cent), 'breeding or selling livestock' (15 per cent) and 'selling grains' (16 per cent). This was followed by 'selling fruit and vegetables' (9 per cent), 'transportation' (7 per cent) and 'cooking or selling buns or other baked goods' (6 per cent). The remaining businesses incorporated sectors such as clothing, tailoring, hairdressing and crafting. There were important differences in the types of activity in which men and women were engaged: The predominant activities among males were breeding livestock (29 per cent), petty trading (21 per cent) and taxi-driving/transportation (14 per cent) and selling grains (13 per cent), while females were engaged in petty trading (27 per cent), breeding livestock (20 per cent), selling fruit and vegetables (14 per cent) and selling grains (14 per cent).

The cash-plus programme also increased the amount of sales in the most recent operating month by TZS6,224 (approx. US$2.7) on average, and the amount of profit in the most recent operating month by TZS3,246 (approx. US$1.4) on average.

It is encouraging that the positive impacts of the cash-plus intervention on micro-entrepreneurial activities were sustained approximately two years after the end of the intervention (and four years after the start of the intervention), especially considering the contextual adverse economic factors, including the extended, albeit temporary, PSSN payment stoppages and the COVID-19 pandemic, which began between rounds three and four.[22]

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21 These include five outcomes: whether the youth is currently doing business; whether the youth owns any asset used for the business; whether the youth owns livestock; total revenues from sales during the last month the business was in operation; total profit or loss during the last operating month. Most of these outcomes were not measured at baseline, so estimated impacts were obtained by using a single-difference specification comparing values between youth in treatment and control villages (not controlling for the baseline value of the outcome).

22 We tested whether round three outcome variables were balanced between youth who were in interviewed in round four and youth who attrited between round three and four. The attrition analysis showed that within cash-only (control) villages, youth who were interviewed in round four were significantly more likely to operate a business in round three compared to youth who attrited between rounds three and four (see Table B.31, Appendix B). Hence, estimated impacts on business rate at round four are likely to be underestimated.

Table 7.2. Cash-plus impacts on business (single difference)

	ITT IMPACT	ATT IMPACT	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)
Currently doing business	0.068**	0.179**	0.077	0.144
	(0.01)	(0.04)		
Owns any assets used for the business	0.024**	0.063**	0.019	0.043
	(0.01)	(0.02)		
Owns livestock	0.031**	0.082**	0.004	0.035
	(0.01)	(0.02)		
Total sales/revenues in latest operating month (TZS 000s)	6.224*	16.407*	7.892	14.366
	(3.05)	(7.96)		
Total profit or loss in latest operating month (TZS 000s)	3.246**	8.563**	2.762	6.168
	(1.17)	(3.12)		
N	2,053	2,052	1,064	989

Notes: Linear models were estimated for the panel of youth interviewed at both baseline and in round four. Regressions control for gender, age at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01.

This sustained impact on entrepreneurial activities was underscored in qualitative interviews with both youth and mentors. During the mentoring phase, mentors facilitated capacity building in the chosen activities, including linking youths to technical personnel such as agricultural extension workers and other professionals. Youth worked with mentors to select an activity that they thought they were capable of doing in their own context following training in how to design a business idea. The process was described as follows: "Everyone came up with a business idea, we did a joint analysis and […]then we went through it. Then, after the money was given, they [youth] were supervised along with the village leaders, with the mentor and the parents themselves being the main managers for their projects" (Mentor 5, Mufindi, 26 January 2021).

One of the youth explained this process during an interview:

R: On the day we were being guided in these things, some people chose goats, but I chose this [pigs] and I was introduced to a veterinary doctor – the veterinary extension officer. He is the one who taught me more about how to take care of livestock.

I: What was your mentor's role in choosing the type of grant?

R: It was the same person who was training us.

I: What was his contribution in guiding you to choose the type of grant?

R: Just stressing.

I: What type of stress?

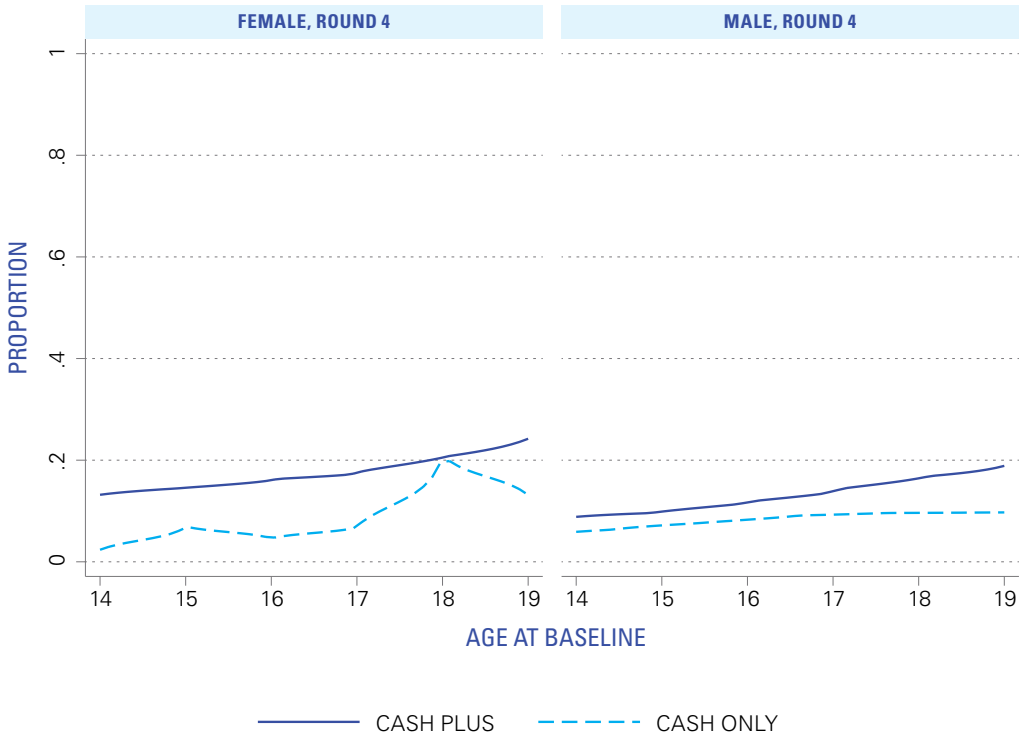
R: I mean he stressed saying, "You have chosen that you will do this. You have to be keen, with the grant that you have been given." That's when they got me the veterinary doctor.

(Interview with male, 23 years old, single, Village 1192, 30 January 2020).

During qualitative interviews, it also emerged that, while some youths were able to sustain their entrepreneurial activities, others failed for a number of reasons, including parental interference with the capital and poor outcomes, such as inability to control livestock diseases. Key informants suggested that mentors who were extension workers themselves performed better, as they were more able to connect youth with their (extension worker) colleagues.When analysing these impacts by gender (*see Figure 7.1 below and Table C.7.2 in Appendix C*), we observed that the positive impacts of the intervention on currently running a business were driven by the female subsample: While the cash-plus intervention increased the probability that females were doing business by 9.5 percentage points, the impact was not significant among males. In qualitative interviews, females explained the more positive impacts on their businesses by their greater tendency to settle in one location compared to their relatively more mobile male counterparts. Thus, it was easier for females (and their mentors) to acknowledge progress in their business activities than it was males. The positive effect on profits was also significant among females but not among males. The effect on owning assets for business was only significant among males, while the effect on owning livestock was significant and similar in magnitude for both sexes. Qualitative interviews also underscored that gender norms may explain why females were more likely to have a business: because they are usually at home taking care of the livestock. Females in our sample also demonstrated more staying power, while males had a higher tendency to move away from the business when it was not working out.[23] Gender-specific effects will be further disentangled in Section 14.

23 Quantitative baseline data measuring staying power confirm this gender pattern, with females having significantly higher levels of staying power compared to males. In terms of mobility, based on quantitative data from control villages, there are no significant difference between males and females in the perceived likelihood to migrate or in movement across villages, regions or districts.

Figure 7.1. Proportion of youth who had started a business during the previous 12 months, by gender



7.3 Economic participation and time use

In this section, we analyse cash-plus impacts on youth participation and time spent in economic activities during the week before the interview, exposure to work-related hazards, and on participation and time spent in household chores.

Given the increase in youth business activities, we expected an increase in youth participation and time spent on economic activities overall. In terms of engagement in household chores, however, this might decrease if youth spent some of the time they would have spent on household chores engaging in increased economic activities instead. Conversely, engagement in some chores related to new productive endeavours might increase. For example, if youth invested in livestock, it is likely that they would spend more time collecting water or, if their business involved selling prepared foods, they might spend more time cooking.

The survey collected information on participation in and hours spent in the previous seven days on six types of economic activity: (1) farm work for the household, excluding livestock; (2) livestock herding for the household; (3) fishing for the household; (4) work in the household's non-agricultural business; (5) paid work outside the household; and (6) involvement in TASAF public works programmes. The survey also included questions about participation in and hours spent on five types of household, domestic and care work: (1) collecting water; (2) collecting firewood or other fuel materials; (3) collecting

nuts or other tree fruits; (4) taking care of children, cooking or cleaning; and (5) taking care of elderly or sick household members. We did not find evidence of differential attrition in the panel sample for these outcomes, except for participation in and hours spent on involvement in TASAF public works and participation in taking care of children, cooking or cleaning. For these two outcomes, we also comment on DD results below.

At baseline, 78 per cent of youth participated in economic activities during the week before the interview, with the most common activities being farm work for the household, excluding livestock (66 per cent participation rate at baseline), and livestock herding for the household (43 per cent). Approximately 17 per cent of youth did paid work outside the household, while participation rates in the household's non-agricultural business was approximately 5 per cent.

When all economic activities were analysed together (indicator equal to one if the youth engaged in at least one activity and zero otherwise), the cash-plus programme did not significantly influence youth participation in economic activities during the week before the interview (*see Table 7.3*). However, when examining activities separately, we observed statistically significant programme impacts on youth engagement in livestock herding for the household, as well as on farm work for the household (excluding livestock). Youth in cash-plus villages were 5.7 percentage points more likely to have performed farm work for the household and 8 percentage points more likely to have participated in livestock herding for the household, compared to the control group.

Some youth explained how the entrepreneurship capital received through the cash-plus programme enabled them to start a business or to raise capital for it. They also elaborated on the role of mentors in supporting youth in their entrepreneurial initiatives:

R: I bought chickens, built a coop as usual and put the chickens in the coop. I started feeding them as required and giving them medicines.

I: How many chickens did you start with?

R: Ten.

I: … and, perhaps, apart from guiding and advising you about a business that could earn you a profit or a business with a ready market, what was the role of your mentor, who you call a trainer [or] a teacher? What was her or his role in your selection of the grant?

R: It was [to] giv[e] us advice and to guide us.

I: What type of advice did your mentor give you?

R: When training us about these businesses, the mentor was guiding us [on] how to identify [the] opportunities of that business and the needs of customers

(Interview with female, 21 years old, married, Village 1091, 25 January 2021)

It is important to mention that participation in farming and livestock herding activities decreased with respect to round three, and more so in cash-only villages (control group).[24] Meanwhile, youth were less likely to be looking for a job in the previous seven days. ANCOVA estimates also indicated that youth were more likely to engage in TASAF Public Works as a result of the intervention. However, this variable was not balanced at baseline and the impact is not robust to DD (*see supplementary online appendix B*). Hence, we cannot conclude that the programme significantly influenced youth participation in TASAF public works.

We observed similar results when looking at the effects of the intervention on time spent on economic activities in the previous seven days (*see Table 7.4*) and we detected no differential impacts on time spent on economic activities and earnings by gender (*see Table C.7.4, Appendix C*).

When analysing the impacts of the intervention by gender (*see Table C.7.3, Appendix C*), we observed that all significant impacts on participation in economic activities were driven by the female subsample. While at baseline males were more likely than females to engage in farm work, by round four their participation in farm work had decreased at a similar rate in both control and treatment villages. In the case of females, farm work participation slightly decreased among the control group while it increased among the treatment group. Similarly, participation in livestock herding for the household among females increased from 13 per cent at baseline to 34 and 37 per cent in control and treatment villages, respectively, by round four. Meanwhile, participation in livestock herding for the household among males decreased from 51 per cent at baseline to 39 and 43 per cent in control and treatment villages, respectively, by round four. In round three, conclusions were similar, with estimated impacts on farm work for the household and livestock herding for the household being statistically significant for females only.

24 In regard to livestock herding, the attrition analysis showed that in cash-plus villages youth who were interviewed in round four were significantly more likely to have participated in herding in round three, compared to youth who had attrited between rounds three and round four (see Table B.31, Appendix B). Hence, the round-four herding rate in cash-plus villages is likely to be overestimated. This does not invalidate the estimated impact, however, which refers to changes between baseline and round four.

Table 7.3. Cash-plus impacts on participation in economic activities (ANCOVA)

	ITT IMPACT	ATT IMPACT	BASELINE MEAN	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH-PLUS MEAN
	(1)	(2)	(3)	(4)	(5)
Any economic activity	0.040	0.102	0.784	0.768	0.805
	(0.02)	(0.06)			
Farm work for the household, excluding livestock	0.057*	0.150*	0.657	0.570	0.625
	(0.03)	(0.07)			
Livestock herding for the household	0.080**	0.210**	0.434	0.383	0.461
	(0.02)	(0.06)			
Fishing for the household	0.010	0.027	0.014	0.015	0.024
	(0.01)	(0.02)			
Household business	0.013	0.035	0.051	0.211	0.223
	(0.02)	(0.06)			
Paid work outside the household	0.009	0.024	0.171	0.269	0.279
	(0.02)	(0.06)			
TASAF Public Works Programme	0.020*	0.054*	0.025	0.014	0.033
	(0.01)	(0.03)			
Looking for a job in the past seven days	-0.044**	-0.116**	0.060	0.116	0.072
	(0.01)	(0.04)			
N	2,051	2,050	2,050	1,064	987

Notes: Linear models were estimated for the panel of youth interviewed both at baseline and in round four. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01.

Participants in qualitative interviews generally expressed the view that male adolescents had more opportunities to engage in income-generating activities outside the home than female adolescents as a result of gender-discriminatory attitudes. Grazing large livestock or hawking items were given as examples of where boys were more likely to be engaged. Such activities were seen to be more risky to the safety of females than males. Hence, the level of economic participation and time use differed in these respects. Nevertheless, the positive impacts of the programme on livestock tending and operating a business, including among females, indicates that the intervention was successful in overcoming some of these gendered barriers, and that it provided females with more opportunities than they would have had without the programme.

Similarly, the qualitative responses indicated that the household-based division of labour was still based on the traditional roles of females and males, with females doing almost all the housework, such as sweeping, cooking and cleaning, while a few males mentioned doing some outside chores, such as cleaning around the home. We observed that many males and females were engaged in farming for the household.

Table 7.4. Cash-plus impacts on hours spent on economic activities and earnings (ANCOVA)

	ITT IMPACT	ATT IMPACT	BASELINE MEAN	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
RECALL PERIOD: PREVIOUS SEVEN DAYS	(1)	(2)	(3)	(4)	(5)
Hours spent on any economic activity	2.832*	7.384*	13.923	23.591	26.769
	(1.31)	(3.50)			
Hours spent on farm work for the household, excluding livestock	2.051*	5.388*	8.130	10.679	12.804
	(0.82)	(2.22)			
Hours spent on livestock herding for the household	0.615	1.617	3.025	2.857	3.576
	(0.33)	(0.88)			
Hours spent fishing for the household	0.013	0.035	0.067	0.072	0.084
	(0.04)	(0.09)			
Hours spent on household business	0.601	1.559	0.680	2.897	3.502
	(0.50)	(1.34)			
Hours spent doing paid work outside the household	-0.558	-1.502	1.917	7.023	6.609
	(0.77)	(2.05)			
Daily amount received for last payment in paid job (TZS 000s)	0.885	2.328	1.818	2.428	3.383
	(0.65)	(1.69)			
Hours spent engaging in TASAF Public Works Programme	0.127	0.335	0.103	0.064	0.195
	(0.08)	(0.20)			
N	2,052	2,051	2,051	1,064	988

Notes: Linear models were estimated for the panel of youth interviewed both at baseline and in round four. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01.

Next, we analysed whether the cash-plus programme affected youth exposure to hazards while performing economic activities, as described by Dayıoğlu (2012) and the classification of hazardous occupations within the Tanzanian legislation.[25] The most common hazards faced by adolescents in round four were extreme cold, heat or humidity (32 per cent), working with dangerous tools (20 per cent), exposure to dust, fumes or gases (20 per cent) and carrying heavy loads (20 per cent). Working on bodies of water, working at night and working in places of entertainment were relatively less common. Approximately 8 per cent of youth in control villages and 10 per cent in treatment villages had been injured or had suffered from a work-related illness in the week before the interview, but the programme did not lead to any statistically significant change in this outcome. Moreover, injuries were relatively minor in nature as they caused youth to miss less than a day of their main activity on average.

Increased participation in economic activities following the cash-plus programme led to youth in cash-plus villages being more exposed to work-related hazards in the week before the interview. This was not the case in round three, when impacts on hazards were not statistically significant. the programme increased the probability of youth being exposed to any work-related hazard (aggregate measure) by 6.8 percentage points and, when looking at each hazard separately, the intervention increased exposure to: dust, fumes or gases; to extreme cold, heat or humidity; and to high levels of noise and vibration (*see Table 7.5*). The types of hazard to which youth were exposed were directly linked to the type of activity they performed. For instance, higher exposure to dust, fumes or gases or was probably the result of working in the timber industry, one of the main sources of employment in Mufindi. When looking at these indicators by gender (see *Table C.7.5, Appendix C*), we see that the impacts on any work-related hazard are driven by the female sample, while the impacts on the specific hazards mentioned are driven by the male sample. In addition, males were more likely to work on bodies of water (sea, lakes, rivers) because of the intervention. In qualitative interviews, it emerged that exposure to hazards from economic participation was also influenced by the gendered opportunities for work available to either or both female and male youth. While, in some instances, youth declared that they usually engaged in any activity irrespective of gender, it was observed that male youth were highly exposed to certain risky activities such as operating a *bodaboda* (motorcycle taxi) that exposed them to accidents or theft.

25 We considered the following eight hazards: carrying heavy loads; working with dangerous tools; exposure to dust, fumes or gases; exposure to extreme cold, heat or humidity; exposure to high levels of noise or vibration; working on bodies of water, such as lakes or rivers; working at night (8 p.m. to 6 a.m.); and working in bars, hotels or places of entertainment).

Table 7.5. Cash-plus impacts on work-related hazards (single difference)

	ITT IMPACT	ATT IMPACT	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)
Exposure to work-related hazards	0.068*	0.180*	0.476	0.540
	(0.03)	(0.08)		
Carrying heavy loads	0.031	0.082	0.198	0.235
	(0.02)	(0.05)		
Working with dangerous tools	0.009	0.022	0.204	0.219
	(0.03)	(0.07)		
Exposure to dust, fumes or gases	0.049*	0.129*	0.195	0.244
	(0.02)	(0.06)		
Exposure to extreme cold, heat or humidity	0.067*	0.176*	0.323	0.384
	(0.03)	(0.08)		
Exposure to high levels of noise or vibration	0.037*	0.097*	0.099	0.134
	(0.02)	(0.05)		
Working on bodies of water (sea, lakes, rivers)	0.012	0.031	0.044	0.055
	(0.01)	(0.03)		
Working at night (8 p.m. to 6 a.m.)	0.002	0.006	0.055	0.054
	(0.01)	(0.03)		
Working in bars, hotels or places of entertainment	0.002	0.004	0.036	0.037
	(0.01)	(0.02)		
Suffered from work-related injury or illness	0.026	0.069	0.077	0.106
	(0.02)	(0.04)		
Number of days of main activity missed due to injury or illness	0.061	0.157	0.657	0.743
	(0.19)	(0.50)		
N	2,053	2,052	1,064	989

Notes: Linear models were estimated for the panel of youth interviewed both at baseline and in round four. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01.

Most youth were engaged in household chores at baseline, with the most common activities being taking care of children, cooking or cleaning and collecting water (72 and 66 per cent baseline participation rate, respectively) (*see Table 7.6*). In round three, the cash-plus intervention did not affect participation in household chores. In round four, participation in and time spent on household chores did not change following the intervention except for taking care of elderly or ill people, which increased by 6.5 percentage points in cash-plus villages compared to control villages. In round four, 22

per cent of youth in cash-plus villages took care of elderly or ill people in the week before the interview, compared to 16 per cent in control villages. It is possible that this was driven by the increase in income from participating in the programme as well as acquired knowledge about illnesses. There were no programme impacts on time spent on household chores in round four (*see Table 7.7*).[26]

Analysing heterogeneous effects by gender, we observed this positive effect was driven by females and that the intervention also increased the probability of collecting firewood among this group (*see Table C.7.6, Appendix C*).

We observed that the programme increased the time females spent on household chores during the day before the interview by more than four hours. While at baseline both females and males spent an average of 35 hours a week on household chores, by round four, males (in both control and treatment villages) were spending an average of 44 hours a week on such chores, while females were spending almost 50 hours in control villages and 55 hours in treatment villages (*see Table C.7.7, Appendix C*).

Table 7.6. Cash-plus impacts on participation in household chores (ANCOVA).

	ITT IMPACT	ATT IMPACT	BASELINE MEAN	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
RECALL PERIOD: DAY BEFORE	(1)	(2)	(3)	(4)	(5)
Any chores	0.012	0.031	0.888	0.830	0.828
	(0.02)	(0.05)			
Collecting water	0.001	0.002	0.659	0.634	0.628
	(0.03)	(0.07)			
Collecting firewood	0.035	0.092	0.345	0.362	0.393
	(0.03)	(0.08)			
Collecting nuts	0.015	0.039	0.106	0.110	0.119
	(0.02)	(0.04)			
Taking care of children, cooking or cleaning	0.030	0.078	0.719	0.603	0.602
	(0.02)	(0.06)			
Taking care of elderly or ill people	0.065**	0.172**	0.220	0.160	0.220
	(0.02)	(0.06)			
N	2,053	2,052	2,052	1,064	989

Notes: Linear models were estimated for the panel of youth interviewed both at baseline and in round four. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01.

26 Results on time spent on and participation in chores did not change significantly when using DD models (see supplementary online appendix B).

Table 7.7. Cash-plus impacts on time spent on household chores (ANCOVA)

	ITT IMPACT	ATT IMPACT	BASELINE MEAN	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)
Hours spent on any chores	0.019	0.046	3.010	3.349	3.221
	(0.17)	(0.44)			
Hours spent on collecting water	-0.072	-0.192	0.728	0.865	0.778
	(0.06)	(0.15)			
Hours spent on collecting firewood	-0.001	-0.004	0.500	0.598	0.591
	(0.06)	(0.16)			
Hours spent on collecting nuts	0.032	0.085	0.141	0.168	0.192
	(0.03)	(0.07)			
Hours spent taking care of children, cooking or cleaning	-0.038	-0.102	1.285	1.445	1.294
	(0.08)	(0.21)			
Hours spent on taking care of elderly or ill people	0.098	0.260	0.356	0.273	0.366
	(0.05)	(0.14)			
Total hours spent on work and chores in the previous week	2.942	7.652	34.990	47.036	49.315
	(1.87)	(4.94)			
N	2,053	2,052	2,052	1,064	989

Notes: Linear models were estimated on the panel of youth interviewed both at baseline and in round four. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01.

7.4 Household-level food and water insecurity

Other concepts related to economic security include: (1) food insecurity, defined as an individual or household having an insufficient supply of or access to safe and nutritious food needed for normal growth and to maintain a healthy life (Moncayo and Cafiero, 2021); and (2) water insecurity, defined as the inability to access and benefit from adequate (i.e., appropriate quantities for all household uses), reliable and safe water for well-being and a healthy life (Jepson et al., 2017; Young et al., 2019). It is plausible that the cash-plus intervention may have improved food and water security among treatment households through improvements to overall economic security.

In round four, a module on household food insecurity and water insecurity was added to the household questionnaire. The Household Food Insecurity Access Scale (HFIAS) comprises a set of nine questions that have been used in several countries and appear to distinguish food-insecure from food-secure households across different cultural

contexts (Coates et al., 2007). It includes questions such as: In the past four weeks, did you or any household member have to eat some foods that you really did not want to eat because of a lack of resources to obtain other types of food?; in the past four weeks, did you or any household member go to sleep at night hungry because there was not enough food?; and in the past four weeks, was there ever no food to eat of any kind in your household because of lack of resources to get food? Response options are: never (zero times), rarely (once or twice), sometimes (3–10 times) or often (more than 10 times). The overall HFIAS indicator is constructed by summing responses to all nine items and ranges from zero to 27. In addition to the HFIAS questions, we asked household respondents whether, in the last twelve months, they had faced a situation when they did not have enough food to feed the household and whether they normally eat at least three meals a day.

To measure water insecurity, we relied on the short form (comprising four indicators) of the Water Insecurity Experiences (WISE) Scale (Young et al., 2021), a validated tool for measuring water access (Young et al, 2019). These four questions are: In the past four weeks, how frequently did you or anyone in your household worry you do not have enough water for all of your household needs?; in the last four weeks, how frequently have you or anyone in your household had to change schedules or plans due to problems with you water situation?; "in the last four weeks, how frequently has there not been as much water to drink as you would like for you or anyone in your household?; and in the last four weeks, how frequently have you or anyone in your household had to go without washing hands after dirty activities because of problems with water? Response options are: never (zero times), rarely (once or twice), sometimes (3–10 times) or often (more than 10 times). The WISE-4 indicator is constructed by summing responses to all four items and ranges from zero to 12.[27]

In order to study whether the cash-plus intervention improved water and food insecurity, we merged information on these indicators from household surveys with youth-level data. We then performed analysis at the youth level, meaning that youth siblings living in the same household were awarded the same household score for food and water insecurity. Few households, however, contained more than one youth. On a scale ranging from zero to 27, we observed that the average household food-insecurity score was 4.5 and 4.8 among control and treatment youth, respectively (*see Table 7.8).* In a separate study validating the HFIAS in Iringa, the United Republic of Tanzania, the mean score was 9.2 (Knueppel et al., 2010), significantly higher than in our sample. For water insecurity, we used the short-form of the Water Insecurity Scale (WISE-4) (with a potential range of zero to 12) (Young et al., 2021), the average was 1.0 and 1.2 among control and treatment youth, respectively. As a validation of the WISE-4 was only published in 2021, there are no published studies with which to compare these mean scores. In our study, the corresponding percentages were 4 and 3 per cent among control and treatment youth, respectively. We did not observe any impacts of the cash-plus programme on household food or water insecurity (*see Table 7.8*).

27 Cronbach's alpha for the HFIAS index and for the WISE-4 index were 0.90 and 0.91, respectively, indicating good inter-item reliability.

Table 7.8. Impacts on household food and water insecurity (single difference)

	ITT IMPACT	ATT IMPACT	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)
Household Food Insecurity Access Scale (HFIAS) (0–27)	0.224	0.585	4.523	4.757
	(0.31)	(0.82)		
Not enough food	0.056	0.147	0.442	0.449
	(0.03)	(0.09)		
Two or less meals a day	-0.020	-0.053	0.578	0.564
	(0.03)	(0.08)		
Short form of the Water Insecurity Experiences (WISE-4) Index (0–12)	0.196	0.517	1.038	1.230
	(0.13)	(0.35)		
N	2,041	2,040	1,059	982

Notes: Linear models were estimated for the panel of youth interviewed both at baseline and in round four. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01.

In qualitative interviews, food security was mentioned by some participants as a problem for the household:

R: The economic situation at home is average. I say it is average because in the past it was bad, but when TASAF assistance came, we received some capital. Because of the capital we received, at present, [although] the situation isn't very good, the future is promising.

I: And how was the situation in the past? You said in the past it was very bad.

R: To tell the truth, our biggest problem at home was food. We used to cultivate large farms but some reminiscing on the past the yield was very small.

(Interview with male, 23 years old, single, Village 1192, 30 January 2020)

Although the intervention had no direct impacts on household food security, as reported in the qualitative responses, the establishment of small businesses likely improved access to basic household needs.

In summary, the cash-plus programme had substantial impacts on the probability of starting a business, and this impact was sustained almost four years after the start of the intervention. Two years after the end of the programme and receipt of the productive grant, adolescents in cash-plus villages were more likely to be running a business and to be making a profit. The programme also increased youth participation in some economic activities, and most impacts were driven by the female subsample. Changes in youth economic activities did, however, increase the level of exposure to work-related hazards. Despite these impacts on improved economic outcomes, the intervention did not affect food and water security.

8. Mental health

Key findings

- Despite protective effects on mental health in round three (in round two, no impacts were observed), the cash-plus programme increased the likelihood of respondents from the pooled sample experiencing depressive symptoms in round four.
- Negative impacts on mental health in round four may be indicative of high levels of disappointment and disillusionment about the challenges created by the COVID-19 pandemic, as the programme promoted increased occupational aspirations and improved well-being. Thus, setbacks and unrealized expectations experienced in the pandemic may have affected youth in treatment villages more than those in control villages.
- The intervention did not change self-perceived stress levels at any follow-up data collection periods.

This section describes the programme impacts on depressive symptoms and self-perceived stress.

Poor mental health in adolescence contributes to diminished educational achievement, increased risks of substance abuse and adolescent pregnancy, and causes the highest burden of disease for youth (WHO, 2021). Mental-health disorders often emerge during mid to late adolescence (Petito et al., 2020), are associated with other poor outcomes later in life and can be passed down to future generations (Keenan-Miller et al., 2007; Mthembu and Eyal, 2018). As the social and economic conditions of poverty increase the likelihood of having poor mental health (Lund et al., 2010), youth living in poverty are acutely vulnerable. Researchers and advocates are increasingly exploring how social protection programmes may help improve mental health among vulnerable populations (Attah et al., 2016).

Three studies have demonstrated the ability of governmental cash-transfer programmes to improve youth mental health, although results are mixed. A study of the governmental Social Cash Transfer Programme in Malawi found improvements in mental health, with greater effects among females (Angeles et al., 2019). The Cash Transfer for Orphans and Vulnerable Children Programme in Kenya improved mental health among males, but not females (Kilburn et al., 2016). Finally, a previous study examining the United Republic of Tanzania's PSSN (the overall programme rather than the cash-plus programme evaluated in the current report) had mixed findings, whereby the conditional cash transfer improved the mental health of males but had adverse effects among females (Prencipe et al., 2021). Thus, there is potential for social protection programmes to improve poverty-induced mental-health problems, but impacts may vary by gender or other characteristics. The impacts of integrated social

protection programming or cash plus interventions, however, have not been previously studied and are the focus of the current section.

8.1 Symptoms of depression

We measured mental health during all rounds of data collection using the 10-item Centre for Epidemiological Studies Depression Scale (CES-D10).[28] Higher scores reflect more depressive symptoms. To define the presence of depressive symptoms, a binary indicator was then created to assess whether youth scored greater than or equal to 10 on the CES-D10 based on the cut-off used in previous work (Onuoha et al., 2009).[29]

Despite protective impacts on depressive symptoms in round three, the cash-plus programme increased the likelihood that youth reported depressive symptoms in round four (*see Table 8.1*). At baseline, 29 per cent of youth reported depressive symptoms. By round four, 27 per cent of control youth and 34 per cent of treatment youth reported having depressive symptoms. The intervention increased the probability of youth exhibiting depressive symptoms by 6.4 percentage points, which is in contrast to the 6.5 percentage point decrease in the probability of exhibiting depressive symptoms in round three. The ATT shows an almost threefold amplification of this impact. Outcomes were balanced at baseline within the panel sample. The negative impacts in round four were not confirmed by the DD analysis (*see Table S.8.1, supplementary online appendix B*), although this might be due to the lower power of DD when compared to ANCOVA. These impacts did not differ by gender, with an increase of nearly 7 percentage points for females and 6 per cent for males, although these results were not significant at the 5 per cent level among males or females when analysed separately (*see Table C.8.1, Appendix C*). We present the increase in depressive symptoms for cash-plus youth in round four according to age at baseline (*see Figure 8.1*). The negative impacts on mental health in round four might indicate that the programme led to higher levels of disappointment and disillusionment about the challenges created by the COVID-19 pandemic. As the programme promoted increased occupational aspirations and improved well-being – leading to better mental health in round three – the setbacks and unrealized expectations experienced in the pandemic may have affected youth in treatment villages more than those in control villages.

28 The internationally validated 10-item short form of the CES-D (CES-D10) comprises 10 questions on the feelings and behaviours of respondents during the previous seven days, including: How often did you feel that everything you did was an effort? and How often were you bothered by things that don't usually bother you? The frequency of responses to each question is measured using a four-point scale. To calculate the CES-D10 score, individual scores are summed for all 10 questions, ranging from 0 to 30.

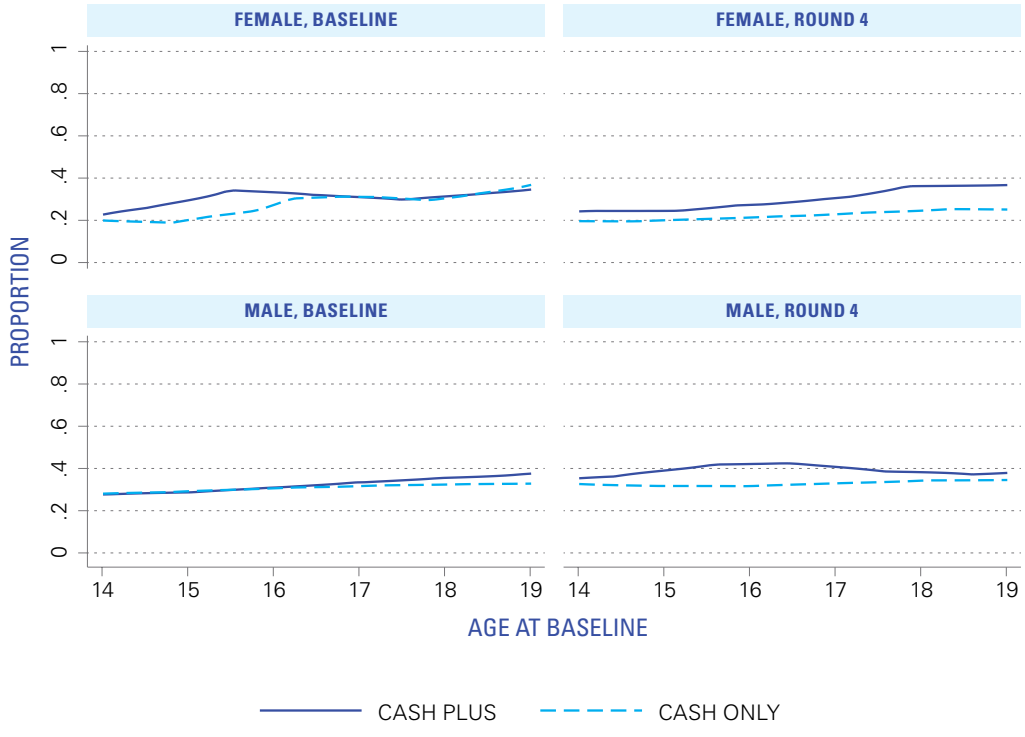
29 Cronbach's alpha, a measure of inter-item reliability, estimated in the overall sample produced a value of 0.79 at baseline, 0.74 in round two, 0.78 in round three and 0.80 in round four, indicating good consistency across indicators (Nunnally, J. C., Psychometric theory 3E, 1994, Tata McGraw-Hill Education).

Table 8.1. Cash-plus impacts on mental health indicators (ANCOVA)

	ITT IMPACT	ATT IMPACT	BASELINE MEAN	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)
Reports depressive symptoms (CES-D10 score ≥ 10)	0.064*	0.169*	0.289	0.269	0.338
	(0.03)	(0.08)			
Self-perceived stress					
ELDI (0–39)	0.283	0.743	3.481	3.870	4.063
	(0.24)	(0.63)			
Well-being subscale	0.256	0.672	2.907	3.133	3.328
	(0.18)	(0.47)			
Risk subscale	0.047	0.124	0.255	0.298	0.335
	(0.05)	(0.14)			
Relations subscale	-0.013	-0.036	0.319	0.440	0.400
	(0.07)	(0.18)			
N	2,053	2,052	2,052	1,064	989

Notes: Linear models were estimated for the panel of youth interviewed both at baseline and in round four. Regressions control for gender, age and outcome value and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. ELDI = enhanced life distress inventory. ELDI scores differ slightly from previous reports due to former miscoding of the indicator. *p < 0.05 **p < 0.01.

Figure 8.1. Proportion of youth exibiting depressive symptoms (CES-D10 score ≥ 10) by time and gender



8.2 Stress

The social and economic factors associated with living in poverty not only increase exposure to stressors and stressful events but may also contribute to poor and ineffective coping mechanisms (Hamad et al., 2008). Chronic stress also has subsequent negative effects on overall well-being and physical health (Gianaros and Wager, 2015).

Self-perceived stress levels were measured using the enhanced life distress inventory (ELDI) full scale (Palermo et al., 2020).[30] Additionally, three subscales of ELDI were analysed: (1) economic and health-related well-being (with items related to financial situation, failure of business or farm, employment, education, food and water, and health); (2) risk/security (with items related to substance use, violence and theft); and (3) relationships (with items related to partner, family, friends and pregnancy).[31]

No significant programme impacts were found on the ELDI full scale or on the subscales (*see Table 8.1*). These null results were consistent by gender (*see Table C.8.1, Appendix C*). The ELDI score was already low at baseline, when the mean score for the pooled sample was 3.5. These scores increased slightly for the control group (to 3.9) and slightly more for the treatment group (to 4.1) by round four (*see also Figure 8.2*). The overall scale and two of three subscales had positive coefficients, but none of the impacts were significant (*see Figure 8.3*). There was no evidence of attrition issues in mental-health measures during the survey (*see Table B.18, Appendix B)*.

30 To calculate the ELDI score, interviewers asked respondents if they had worried about any of 13 items during the previous seven days. These items include economic stressors (such as employment, education, and lack of access to food), relationship stressors in the household or with romantic partners and other stressors (such as risk of theft or pregnancy). For each item eliciting an affirmative answer, respondents were then asked how distressed they were. Each stressor was ranked on a scale of one to three, with higher numbers indicating greater distress. A score of zero was assigned to items about which a respondent felt no stress. When we summed all 13 items, the resulting scores on the index had a potential range of zero to 39.

31 Cronbach's alpha for this index was 0.75 at baseline and 0.76 in round four, suggesting that the index showed good reliability for both rounds.

Figure 8.2. Average enhanced life distress inventory (ELDI) score, by time and gender

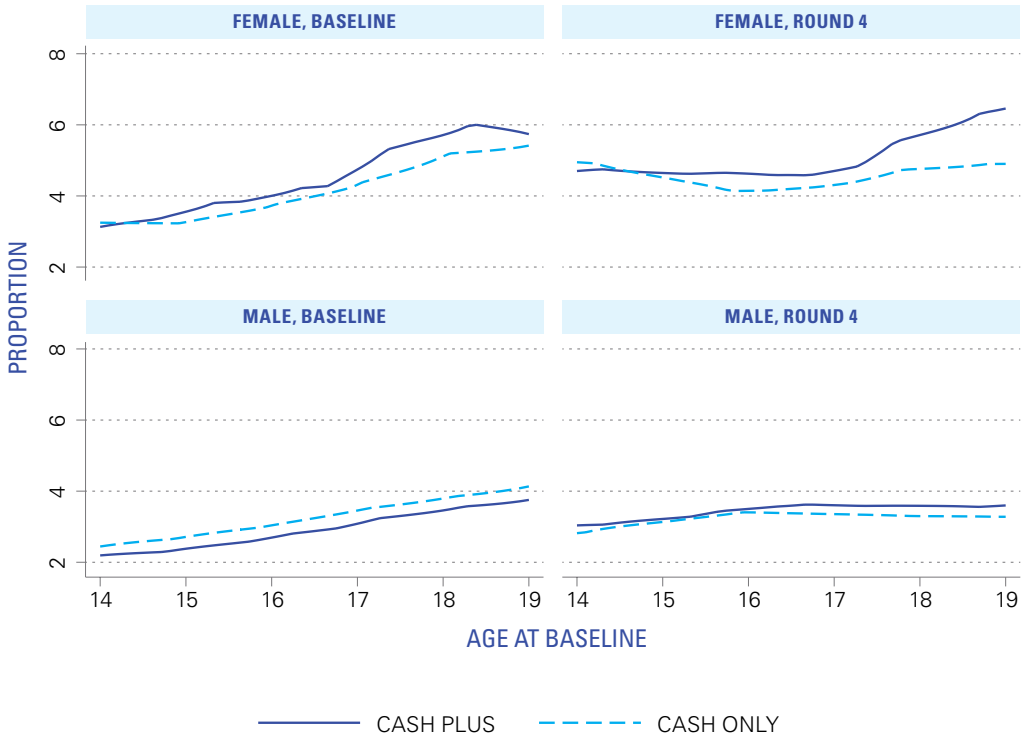
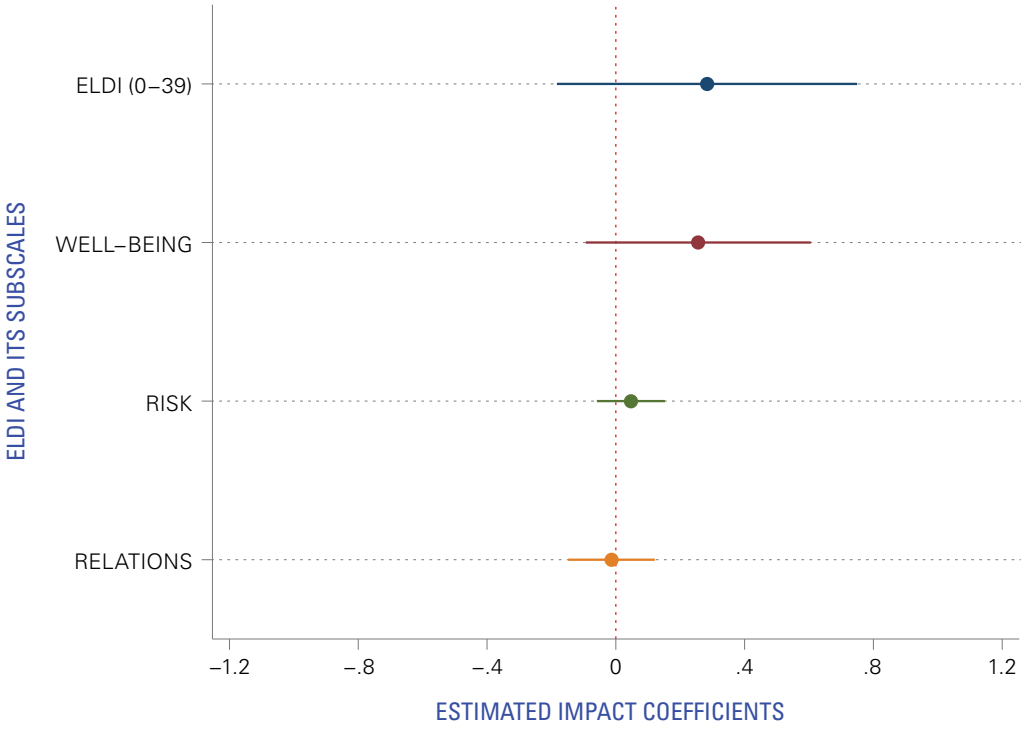


Figure 8.3. Impacts on enhanced life distress inventory (ELDI) score and its subscales



Both female and male youth viewed lack of money or lack of jobs in the village as the highest causes of stress, as the following extracts illustrate:

I worry about getting what I need; for example, I might need vegetables or meat, and I would worry about how I will get the [necessary] money.

(Interview with male, 18 years old, single, Village 1113, 2 February 2021)

For example, when there is no money, you will be surprised that you will miss out food. You will be surprised when you get sick [and] you wonder where to get money to get the services

(Interview with female, completed Form IV, 21 years old, Village 2114, 3 February 2021)

9. Attitudes, risk and social support

Key findings

- In round three, positive programme impacts on self-esteem were observed, but these were not found in rounds two or four. Compared to baseline, in round three self-esteem had decreased for both treatment and control groups as adolescents were growing older, but had decreased less among recipients of the cash-plus programme. By round four, as youth transitioned into adulthood, levels of self-esteem had increased in both treatment and control villages.
- In round three, positive programme impacts on entrepreneurial attitudes were observed, but these were not found at rounds two or four. In round three, the study revealed an impact on this index, with the treatment group experiencing significantly higher levels of than the control group. By round four, index levels were maintained in treatment villages and there was also an increase in control villages, so that differences between the two groups were no longer significant.
- Similar to rounds two and three, in round four the programme did not have an impact on social support, subjective well-being or adolescent decision-making.

This section describes intervention impacts on youth expectations, self-esteem and self-efficacy (locus of control), perceived quality of life, entrepreneurial attitudes, decision-making dynamics and social support. Self-efficacy refers to the degree to which the adolescents perceived control over their life choices and outcomes, while self-esteem refers to the confidence they had in their own self-worth and their abilities. The degree of support that adolescents received from peers, family and the wider community was captured by the social support index. The aforementioned beliefs and attitudes are mutually reinforcing in that self-efficacy, self-esteem and social support all influence adolescent aspirations (Gottfredson, 1981; Hendricks et al., 2015).

Many components of the cash-plus programme are likely to influence adolescent expectations. The face-to-face cash-plus component included discussions about aspirations, skills, business plans and ideas, entrepreneurial responsibilities and life planning. The second phase of the intervention involved mentor guidance on livelihood options through encouragement to set goals and enabling progress towards achievement of those goals. The mentorship phase was also intended to strengthen positive peer relationships, to improve adolescents' sense of self-worth and future-oriented thinking, and to increase confidence and connection with the community. We expected these components to positively influence the outcomes discussed in this section. Additionally, we expected the business and schooling grants given to adolescents to improve their occupational and educational

aspirations and expectations, as a higher socioeconomic status contributes to more ambitious occupational aspirations among adolescents (Cochran et al., 2011; Hannah and Kahn, 1989).[32]

9.1 Occupational and migration aspirations

We present programme impacts on occupational aspirations (*see Table 9.1*). No significant impacts were observed for these outcomes. At baseline, more than 40 per cent of the sample aspired to become a teacher; by round four, this had decreased to approximately 30 per cent for both treatment and control groups. Occupational aspirations to become a business owner were reported by 13.4 per cent of youth in the treatment group compared to 11.1 per cent of those in the control group in round four, a marked increase compared to baseline (3.8 per cent). Both the comparison and treatment groups in round four reported less desire to become a doctor or government worker compared to baseline. We observed baseline balance for these indicators between study arms with the exception of occupational aspirations to be a business owner (which were higher among the control group) or a farmer (which were higher among the treatment group). We did not observe differences in treatment impacts when we analysed occupational aspiration outcomes by gender (see Table C.9.1, Appendix C).

32 In previous rounds of this study, we also examined educational and vocational training aspirations. However, given the age range (18–23 years) for this latest data collection round and a context in which most adolescents do not seek advanced schooling beyond secondary school, we have removed analysis of educational expectations from the current report.

Table 9.1. Cash-plus impacts on occupational aspirations (ANCOVA)

	ITT IMPACT	ATT IMPACT	BASELINE MEAN	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)
Ideal occupation: teacher	-0.003	-0.008	0.412	0.303	0.293
	(0.02)	(0.06)			
Ideal occupation: doctor/ healthcare professional	-0.004	-0.012	0.238	0.185	0.178
	(0.02)	(0.05)			
Ideal occupation: working in governmental/parastatal organization	-0.003	-0.007	0.047	0.020	0.017
	(0.01)	(0.02)			
Ideal occupation: business owner	0.022	0.057	0.038	0.111	0.134
	(0.01)	(0.04)			
Ideal occupation: other	-0.013	-0.032	0.265	0.382	0.377
	(0.02)	(0.06)			
N	2,053	2,052	2,052	1,064	989

Notes: The outcomes capture the type of occupation that youth hoped aspired to, not necessarily considering the constraints they faced. Linear models were estimated for the panel of youth interviewed both at baseline and in round four. Regressions control for gender, age and outcome value at baseline, PAA x size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01.

These findings were supported by the qualitative analysis, where it was seen that, despite some encouragement, few youth opted for the educational capital that would have supported further training such as vocational training. Many youth selected the business capital. For those who selected the educational capital, mentors facilitated their access to Vocational Education and Training Authority (VETA) centres. It is also important to note that even before the cash-plus intervention, some youth had already begun thinking about attending vocational training. The cash-plus intervention facilitated this training, allowing them to realise their aspirations.

We also examined programme impacts on adolescent aspirations to migrate and their preferred migration location. To date, evidence of cash-transfer programme impacts on migration is conflicting (Adhikari and Gentilini, 2018; Angelucci, 2012; Hughes, 2017). These differences in the results of studies evaluating programme impacts on migration may be due to the alignment of migration impacts with intervention goals. More specifically, some social protection programmes may implicitly deter migration via place-based programming, some programmes may implicitly facilitate migration through relaxing liquidity constraints and facilitating reductions in transaction costs, while other programmes are specifically conditioned on the mobilization of clients. We observed no programme impacts on migration aspirations (*see Table*

9.2). Approximately 30 percent of adolescents in both control and treatment wanted to migrate. A slightly higher percentages of youth in the treatment group wanted to migrate to the same region compared to youth in the control group, while more control-group youth aspired to move to another region. We observed no differences in impacts on migration aspirations by gender (*see Table C.9.2, Appendix C*).

Table 9.2. Cash-plus impacts on migration aspirations (single difference)

	ITT IMPACT	ATT IMPACT	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)
Wants to migrate	-0.029	-0.076	0.305	0.277
	(0.02)	(0.06)		
Wants to migrate to the same region	0.005	0.016	0.155	0.161
	(0.02)	(0.05)		
Wants to migrate to another region	-0.034	-0.091	0.150	0.116
	(0.02)	(0.05)		
N	2,053	2,052	1,064	989

Notes: Linear models were estimated for the panel of youth interviewed both at baseline and in round four. Regressions control for gender, age and outcome value at baseline, PAA x size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01.

9.2 Attitudes and decision-making

Adolescent attitudes and decision-making dynamics are explored in the remainder of this section. The former includes outcomes relating to well-being, self-esteem and self-efficacy, entrepreneurial attitudes and perceived social support. Material resource possession is positively associated with subjective well-being, including in African countries (Sarriera et al., 2015). This association suggests that social protection programmes such as the Tanzanian cash-plus programme, through increasing the material resources of adolescents, can potentially improve subjective well-being, which has also been associated with improved health outcomes (Addai et al., 2014).

We measured quality of life by analysing participants' responses to the following question: Imagine a ladder where the bottom step, the first step, represents the worst possible life for you and the highest step, the tenth step, represents the best possible life for you. On which step of the ladder would you say you are today?

Quality of life was higher among adolescents in both control (mean = 4.77) and treatment (4.89) groups in round four compared to baseline (3.78), although there are no programme impacts on this outcome (*see Table 9.3*).

We also analysed impacts on locus of control and self-esteem indices. The locus of control index was obtained using a subset of Levenson's scale (Levenson, 1981). The subset comprised five items, expressed on a Likert scale from one to five, where a higher value indicated a higher level of control. We constructed the index by averaging the five items for each youth. A similar procedure was used to obtain the self-esteem index, for which we used a subset of the Rosenberg's scale (Rosenberg, 1965).[33] The approach used to obtain the locus of control and self-esteem indices followed Laajai and Macours (2017) and studies cited therein (e.g., Bernard et al, 2014; Blattman and Dercon, 2016). No significant intervention impacts were observed for either indices and the locus of control measure decreased slightly for both treatment and control groups in round four compared to baseline (*see Table 9.3*). Compared to baseline, in round three, self-esteem decreased for both groups as adolescents were growing older, but this was less notable among youth in cash-plus villages. In round four, as youth transitioned into adulthood, levels of self-esteem increased in both treatment and control villages.

We observed a difference in programme impacts by gender on a component of the locus of control index that assesses, on a scale of one to five, how much youth agree with the following statement: When you get what you want, it is usually the result of your own actions (data not shown). The mean scores of females in the treatment group (3.83) were higher than those in the control group (3.62), corresponding to a treatment impact of 19.8 percentage points, whereas no impacts were observed among males. We also examined entrepreneurial attitudes and found no programme impacts on this outcome in round four (*see Table 9.3*).[34] In round three, the study had identified an impact on this index, with the treatment group having significantly higher levels compared to the control group. By round four, these levels were maintained in treatment villages and there was also an increase in control villages, so differences between the two groups were no longer significant. No differences in programme impacts were observed when examining entrepreneurial attitudes by gender.

Lastly, adolescents were asked about the social support they received. Social support was measured through a modified version of the Multidimensional Scale of Perceived Social Support (MSPSS). the Introduced by Zimet et al. (1988), the MSPSS has been validated in multiple settings (Laksmita et al, 2020; Nakigudde et al., 2009; Stewart et al., 2014). Four items were considered, with each item ranging from strongly disagree to strongly agree on a five-point Likert scale. The index was created through averaging the scores across all questions.[35] We observed no significant impacts of

33 The locus of control index had a Cronbach's alpha of 0.60 at baseline and 0.56 in round four. The self-esteem index had a Cronbach's alpha of 0.43 at baseline and 0.44 in round four. Given the relatively low alpha value, the set of items used to generate these indices may be measuring more than one dimension. This, however, does not affect our impact estimates nor the internal validity of the study design.

34 The entrepreneurial attitude index was constructed following Valdivia (2015). This study considered four indicator variables (assuming values 0 or 1), proxying for independence, innovation, persistency and drive. For each youth in the sample, the index was obtained by averaging the four responses. Cronbach's alpha here was low at 0.23 in round three (not measured at baseline). In respect of locus of control and self-esteem, the relatively low alpha value indicates that the set of items used to generate this index may be measuring more than one dimension, but this does not affect the internal validity of the study design.

35 This index has a reasonably strong Cronbach's alpha coefficient of 0.65 at baseline and 0.66 in round four.

the intervention on perceived social support in the full sample of youth (*see Table 9.3*) or in subsamples by *gender (see Table C.9.3, Appendix C)*. Baseline balance was observed for all attitude outcomes (the balance for the entrepreneurial index could not be determined as it was not assessed at baseline) (*see Table B.20, Appendix B*).

Table 9.3. Cash-plus impacts on attitudes

	ITT IMPACT	ATT IMPACT	BASELINE MEAN	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)
Quality of life ladder: 1 (worst) to 10 (best)	0.094	0.250	3.782	4.773	4.888
	(0.13)	(0.33)			
Locus of control index (1–5)	0.001	0.002	3.205	3.194	3.195
	(0.03)	(0.08)			
Self-esteem index (1–5)	0.017	0.045	3.938	3.930	3.949
	(0.04)	(0.11)			
Social support index (1–5)	-0.010	-0.028	4.010	4.021	4.026
	(0.03)	(0.08)			
Entrepreneurial attitude index (0–1)	0.010	0.026	-	0.824	0.837
	(0.01)	(0.03)			
N	2,053	2,052	2,052	1,064	989

Notes: Linear models were estimated for the panel of youth interviewed both at baseline and round 4. For quality of life, locus of control, self-esteem and social support, regressions control for gender, age and outcome value at baseline, PAA x size fixed effects. For entrepreneurial attitudes, regressions control for gender, age at baseline, PAA x size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01.

Questions on decision-making were introduced in round four and we present the results here (*see Table 9.4*). We measured the extent to which adolescents felt able to make decisions in their households by analysing their responses to the following question: Imagine a ladder where on the bottom step, the first step, are people with no decision-making power and on the highest step, the tenth step, are people who are able to make all the decisions they wish. On which step of the ladder would you say you are today? This question is an adaptation of Cantril's Ladder of Life Scale (Cantril, 1965). No intervention impacts were observed for this outcome. Furthermore, we asked adolescents about who in the household (the adolescent alone, the adolescent with another household member or another household member only) made decisions about: (1) major purchases for the household; (2) their (i.e., the adolescent's) business start-up; (3) their education; and (4) their access to SRH services. We constructed four indicators equal to one if the adolescent was the sole decision maker, zero otherwise. Thus, the mean results reflect the ability of the adolescents to make decisions alone compared to the other decision-making scenarios (*see Table 9.4*). Since decision-making questions were not asked at baseline, we analysed these outcomes using single difference

modelling. No significant intervention impacts were observed for these outcomes in the pooled or the gender-stratified samples (*see Table 9.4 and Table C.9.4, Appendix C*).

Table 9.4. Cash-plus impacts on decision-making (single difference)

	ITT IMPACT	ATT IMPACT	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)
Decision-making ladder: 1 (low) to 10 (high)	0.039	0.097	5.478	5.536
	(0.15)	(0.40)		
N	2,053	2,052	1,064	989
Youth is the sole decision-maker on major purchases for the household	0.002	0.005	0.212	0.223
	(0.02)	(0.05)		
N	2,015	2,014	1,042	973
Youth is the sole decision-maker on her or his business start-up	0.030	0.079	0.568	0.602
	(0.03)	(0.07)		
N	1,899	1,899	970	929
Youth is the sole decision maker on her or his education	0.016	0.043	0.588	0.607
	(0.03)	(0.07)		
N	1,951	1,951	1,000	951
Youth is the sole decision maker on her or his access to SRH services	-0.029	-0.075	0.821	0.802
	(0.02)	(0.06)		
N	1,999	1,998	1,033	966

Notes: Linear models were estimated for the panel of youth interviewed both at baseline and in round four. Regressions control for gender, age and outcome value at baseline, PAA x size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01.

From qualitative interviews, it was clear that youth greatly depended on family or friends for guidance and direction in their life endeavours, including advice on relationships and economic advancement. It was more common for respondents to share ideas about income-generating possibilities with friends than with their parents or other relatives, for example:

R: If you talk about [who] giv[es] me advice or information, it [is] my fellow youth.

I: What kind of advice?

R: There is a lot of advice. You will find sometimes you see a youth very happy and yet sometimes youth are worried. She or he then follows you asking, "Why are you like that?" I can only tell her or him that I don't understand why it's very hard to get money. I don't know where to begin and [where] to end. Then she or he can say that, from the time we started looking for money, we started with one, two, three, until we reached here. So, that is why I like to sit with my friends who give me different advice on what is right or wrong. I like a person who advises me and says, "We also did the same thing as you are doing. This is how it should be, even us, we started it the same way." So, I listen to her or him and that is why I follow up his or her conversations. Because she or he says that you shouldn't like seeing people prosper and not know where they started from. Look at him, follow and ask, my friend, I can see that you have prospered. How did you start until you got your achievement?

(Interview with male, 20 years old, completed Standard VII, single, Village 1272, 26 January 2021)

A female respondent implicitly referred to gender norms in seeking business advice, indicating that men were perceived as more knowledgeable than women in business matters. In terms of other types of advice and social support, including on health issues, however, females felt more comfortable seeking advice from other women:

R: There are things that you can only tell a female, and can't tell a male. For example, when you are [having] your period, say, [and] in a particular month it has changed. Definitely, I can [talk about] such an issue only [with] a female. She can explain to me whether it is normal or not and she will guide me [on] what to do. Concerning other issues, for example, if I need guidance in business matters, [males] can also guide me in this. In business, you need to have capital; if you need capital to start a bun-selling business, you [will] need a certain amount of money. That's it, capital.

I: Why do you think you cannot consult a female concerning business matters?

R: It depends on knowledge. It's possible that they don't have experience in that business…, depending on the type of business I like to do.

(Interview with female, 20 years old, completed Standard VII, Village 1113, 29 January 2021)

Most youth indicated that they were confident about success in their chosen occupations after the intervention, albeit these expectations were constrained by their immediate socioeconomic environment. We interviewed a youth who wanted to be a successful farmer:

R: I expect to be employing people. I wouldn't like to continue tilling the land because, at that time, I will already have an education and experience.

I: How do you expect to go about it? Can you explain your expectations and how you want to make your dream come true?

R: I will employ people in agriculture.

I: In what type of farming?

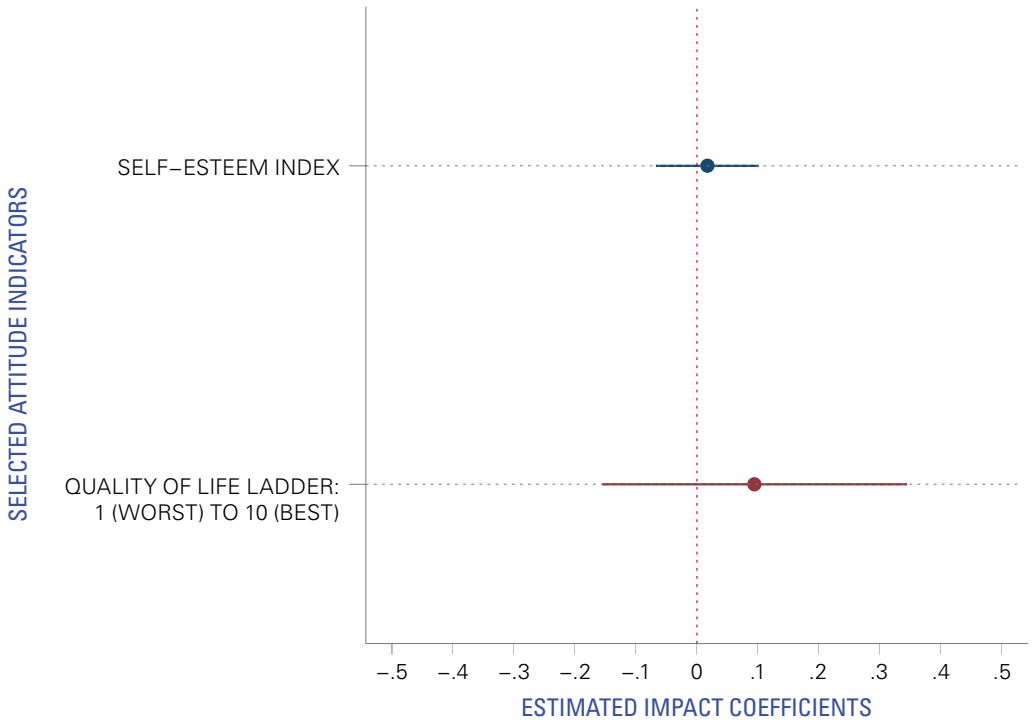
R: In the cultivation of maize.

(Interview with male, 18 years old, completed Form II, Village 1113, 2 February 2021)

Youth often mentioned parents as the immediate sources of social support in order to succeed in life. At times, however, parents discouraged youth's ideas concerning social and economic endeavours. To address this issue, further interventions could consider a role for parents or guardians in training and other intervention components.

We have summarized the ITT coefficients of the key indicators analysed in this section (*see Figure 9.1*).

Figure 9.1: Impacts on self-esteem and quality of life



10. Gender attitudes

Key findings

- The cash-plus programme increased gender-equitable attitudes, particularly among males, after rounds two and three. Impacts on this outcome, however, were not sustained in round four.
- By round four, when youth were aged 18–24 years, we found that gender-equitable attitudes had increased over time among the pooled, male and female samples, and this was the case for both control and treatment groups. Thus, positive trends among the treatment group had not regressed, but rather the control group had essentially 'caught up' over time, which explains why we did not see positive treatment impacts sustained at round four.
- Males, on average, had higher gender-equitable attitudes than females (including on the overall Gender-Equitable Men (GEM) scale and all subscales).

Adolescence is a key period of growth, maturation and social development (Patton et al, 2018). It is also a period when gender socialization intensifies and opportunities related to schooling and employment start to be more constrained for females compared to males (John et al., 2017). Gender socialization is defined as the process in which "individuals develop, refine and learn to 'do' gender through internalizing gender norms and roles as they interact with key agents of socialization, such as their family, social networks and other social institutions".[36] Moreover, the division of labour in the United Republic of Tanzania is highly gendered, with males more likely to work outside the home and females more likely to be constrained to the home by responsibilities related to caring and domestic chores. This confluence of factors has impacts on transitions to adulthood and females' ability to negotiate these transitions.

Social norms can be descriptive (how people behave) or injunctive (what other people approve of). They can influence human behaviour across the life course. Relatedly, gender norms are defined as "societal expectations for men's and women's roles, rights and responsibilities" (Vu et al., 2017).[37] Adolescents' behaviours are influenced by both personal attitudes and social norms, and perceived gender norms play a significant role in health-promoting behaviours (Rice and Klein, 2019). For example, inequitable gender attitudes have been found to be linked to increased risk of IPV, early sexual debut, risky sexual behaviours, HIV and STIs (Conroy, 2014; John et al., 2017; Varga, 2003).

36 John et al., 2017, p. 6.
37 Vu et al., 2017, p. S16.

In face-to-face sessions, the cash-plus intervention focussed on gender attitudes and roles concerning the following topics:

- differences between gender and sex
- gender stereotypes and roles and how they affect males and females
- relationships with family and community
- community expectations of males and females, and relationships
- gender-based violence.

These training discussions could potentially influence gender attitudes as an intermediary outcome to changes in other outcomes in the conceptual framework such as violence and the ability to seek appropriate SRH/HIV and violence-response services.

To assess intervention impacts on gender attitudes, we used a 24-item short version of the Gender-Equitable Men (GEM) scale. The full GEM scale had been previously implemented and validated in Uganda and the United Republic of Tanzania (Levtov et al, 2018; Pulerwitz, 2015), and we used the short form of the GEM that had been used in Uganda (Vu et al, 2017). Items in the GEM scale address attitudes related to four dimensions: violence, reproductive health and disease prevention, sexual relationships, and domestic chores and daily life. Higher scores represent more equitable attitudes. Adolescents and youth who responded with 'Don't know' to some of these items might have lacked experience on the topics discussed, given their young age. Thus, respondents with missing values were dropped from the overall scale or subscale, as applicable.[38] We created subscales for each of the above-mentioned four dimensions of the GEM scale.[39]

In rounds two and three, we found that the cash-plus intervention led to more gender-equitable attitudes in respect of the domestic chores and daily life subscales among the full sample and of the violence subscale among males. Among the pooled sample,

38 Response options to each item comprised: agree, partially agree and do not agree at all. We coded these as equal to one if they agreed or partially agreed to each statement and then summed the items to create a scale. Cronbach's alpha for the 24-item scale was 0.87 both at baseline and in round four, indicating good reliability.

39 The violence subscale included items such as: There are times when a woman deserves to be beaten; a woman should tolerate violence in order to keep her family together; and a man using violence against his wife is a private matter that should not be discussed outside the couple. The reproductive health and disease prevention subscale included items such as: It is a woman's responsibility to avoid getting pregnant; a man should be angered/shocked if his wife asks him to use a condom; and a real man produces a male child. The sexual relationships subscale included items such as: A woman should not initiate sex; you do not talk about sex, you just do it; and men need sex more than women do. Finally, the domestic chores and daily life subscale included items such as: Giving children a bath and feeding them are the mother's responsibility; a man should have the final word on decisions in the home; and a woman should obey her husband in all things. Cronbach's alpha for each subscale at baseline and in round four ranged from 0.61 to 0.78, indicating subscales were also reliable.

there were no sustained impacts on gender-equitable attitudes in round four (*see Table 10.1*). Nevertheless, positive trends among the treatment group seen at earlier waves did not regress but, rather, the control group essentially 'caught up' over time, possibly due to life experiences and transitions to adulthood (by round four, the youth were aged 18 to 24 years). On a scale ranging from zero to 24, the GEM-scale mean score was 14.4 for youth in the control group and 14.5 for youth in the treatment group. Mean scores for the GEM full scale and all subscales in round four were comparable to the baseline scores for both the treatment and control groups. For example, the GEM mean score at baseline was 12.6 compared to 14.4 in round four (four years after baseline). Mean scores for the violence subscale increased from 3.7 at baseline to 3.9 in round four.

Table 10.1. Cash-plus impacts on gender-attitude indicators (ANCOVA)

	ITT IMPACT	ATT IMPACT	BASELINE MEAN	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)
GEM scale (0–24)	0.015	0.041	12.583	14.401	14.491
	(0.42)	(1.14)			
N	1,388	1,388	1,388	738	650
Violence subscale (0–6)	0.010	0.017	3.707	3.924	3.934
	(0.12)	(0.31)			
N	1,911	1,910	1,910	989	922
Reproductive health and disease prevention subscale (0–5)	-0.063	-0.169	2.763	3.222	3.181
	(0.10)	(0.25)			
N	1,678	1,678	1,678	890	788
Sexual relationships subscale (0–8)	0.147	0.395	4.344	5.062	5.226
	(0.14)	(0.38)			
N	1,621	1,621	1,621	855	766
Domestic chores and daily life subscale (0–5)	-0.164	-0.437	1.732	2.041	1.909
	(0.10)	(0.28)			
N	1,981	1,980	1,980	1,031	950

Notes: Linear models were estimated for the panel of youth interviewed both at baseline and in round four. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01.

We found no sustained impacts of the intervention by gender. Males in the treatment group still had higher average gender-equitable attitude scores in terms of the overall GEM scale and the violence and sexual relationships subscales than those in the

control group; however, the differences were no longer statistically significant (*see Table C.10.1, Appendix C*). In terms of changes over time, we also found that mean scores for the full GEM scale and all subscales increased in round four compared to baseline among both males and females. In addition, on average, males had more gender-equitable attitudes (i.e., higher scores on the scale) than females in terms of the overall GEM score and all subscales.

We did not find any evidence of attrition in the pooled or sex-stratified samples in respect of the full scale or the subscales, with one exception: Among males, the violence subscale was not balanced at baseline between treatment and control panel samples.

Domestic chores is one area of activity that tends to reflect gender norms in a given context. Although mentors and programme facilitators indicated that they noticed some changes in male and female participation in household chores, this was not widely reflected among the youth interviewees. Nevertheless, male participants did report helping with household chores, including some which are traditionally viewed as female responsibilities:

I: What about housework? Do you do any housework?

R: Yes.

I: What tasks?

R: For example, I have my younger siblings. If I happen to return from the farm early and my mother

happens to busy with other tasks, I may cook for my siblings while they are still at school.

I: Alright. There is cooking. Perhaps there are household tasks that you do?

R: Cooking and helping with other small chores.

(Interview with male, 23 years old, single, completed Standard VII, Village 1192, 30 January 2021)

Changing traditional gender norms in the community was not an objective of this intervention and respondents reported that this was one of the biggest challenges they faced in attempting to achieve some of the intervention's aims. Nevertheless, the programme did improve gender-equitable attitudes, particularly among boys (in rounds two and three). During qualitative interviews, gender-equitable changes were noted in terms of the increased participation in household chores by male youth, and by male

youth stating that they have stopped targeting female you with catcalls. In quantitative data, we also saw a decrease in the perpetration of violence among males in round three *(see Section 14*). In other areas, however, few improvements were noted. For example, attitudes towards male involvement in family planning was still traditionally oriented, and facilitators reported that males still tended to hold the view that females should be primarily responsible for contraception measures (TASAF Key Informant, 11 January 2021).

In summary, one of the most important contributions the programme made to gender equality was influencing changes in gender attitudes. The initial improvements we saw in gender-equitable attitudes in rounds two and three were not sustained in round four. Nevertheless, changes in experiences of economic activity and violence, and other sustained programme impacts may change the ways in which males and females engage with each other in the communities studied, which could have reinforcing effects on gender-equitable attitudes in the future, whether at household/family level or community level. Other gender-equality outcomes are unlikely to be achieved, however, without more efforts to address rigid male-dominant traditions. Poverty is gendered, as women are often at higher risk of poverty (reflected in the high proportion of elderly female-headed households in the PSSN-eligible population). Women also often have fewer resources to cope with shocks, further exacerbating their risk of poverty. Thus, economic empowerment interventions such as this cash-plus programme need to pay more attention to addressing the gendered drivers of poverty, including gender norms, in order to sustainably reduce poverty and create equitable opportunities.

11. HIV knowledge and sexual behaviour

Key findings

- The positive impacts on HIV knowledge and testing found in round three were not sustained, as the control group caught up with the treatment group in round four. Rates of HIV testing increased over time, however, and earlier impacts of the intervention on these outcomes may still result in higher well-being levels for youth in the future.
- While the intervention increased knowledge on contraceptives in previous rounds, by round four, these impacts were not sustained, as both control and treatment groups had higher levels of knowledge. As in previous rounds, however, the intervention did not increase the use of contraceptive methods. Low availability of condoms, a supply-side limitation that the intervention did not address, could partly explain this finding.
- Contrary to previous rounds, by round four, the cash-plus intervention increased the probability that adolescents would report no risk of HIV infection.
- The intervention had no effects on marriage/cohabitation, the first sexual intercourse being forced, age-disparate relationships, sexual debut or transactional sex. Child-marriage rates over the past 10 years have remained stagnant in the United Republic of Tanzania, and cash transfers that address economic barriers, such as the PSSN, may be more effective than 'plus' interventions.
- Despite not affecting the pregnancy status of females, it did increase the likelihood of males' partners being pregnant, probably due to increased marriage rates among males following the intervention.

This section examines programme impacts on partnerships, sexual-risk behaviours, HIV knowledge and testing, contraceptive knowledge and use, and exploitation (transactional sex and age-disparate relationships).

Girls and young women in the United Republic of Tanzania face multiple risks, including early pregnancy and child marriage, which restrict their current and future opportunities and perpetuate the intergenerational cycle of poverty. Child-marriage rates over time have remained stagnant in the United Republic of Tanzania (Koski et al, 2017).[40] While cash transfers have been posited as a way to mitigate the risks faced by adolescents, to date, there has been mixed evidence of the impacts of cash transfers on SRH outcomes, such as sexual debut, early pregnancy and marriage, contraceptive use, and HIV testing or incidence (Baird et al., 2011; 2015; Dake et al., 2018; Hoddinott and Mekasha, 2017, Tanzania PSSN Youth Study Evaluation Team, 2018).

40 The study considers data for the United Republic of Tanzania between 1965 and 2010.

Similarly, economic insecurity can drive adolescents into exploitative behaviours such as transactional sex (Kamndaya et al., 2016; Maganja et al., 2017). It may be expected, therefore, that economic strengthening interventions could reduce the risk of exploitation. Cash transfers have been associated with delays in sexual debut in Kenya, Malawi and South Africa (Baird et al., 2010; Handa et al., 2014; Heinrich et al., 2017). In South Africa, the child support grant to households was also associated with reduced transactional and age-disparate sex among adolescent girls (Cluver et al., 2013). Among three cash transfer programmes (all NGO implemented) that were directly assessed for their impact on HIV infection, only one (in Malawi) resulted in reductions in HIV incidence, while two in South Africa had no effects (Baird et al., 2012; Humphries et al., 2017; Pettifor et al., 2016).

This evidence suggests that cash transfers may better facilitate safe, healthy and productive transition to adulthood if combined with complementary programmes. Topics covered in the cash- plus training are specified in more detail in the subsections below. They included topics related to pregnancy, family planning, HIV knowledge and testing, and risky sexual behaviours (concurrent partners, condom use, rape and exchanging sex for money). The mechanisms are complex, as early marriage, pregnancy and exploitation are only partially driven by economic insecurity or knowledge, and, ultimately, attitudes and behaviours depend on other drivers such as social norms.

11.1 Partnerships

While only 1.1 per cent of the sample had ever been married or cohabited at baseline, 14 per cent and 16.5 per cent of the control and treatment groups, respectively, were married almost four years later, in round four (*see Table 11.1*). More than 35 per cent of the sample had a boyfriend or girlfriend at round four. As mentioned in previous reports (see, for instance, Tanzania Adolescent Cash Plus Evaluation Team, 2018), the low marriage rates at baseline compared to national rates for the age group[41] were driven by the selection criteria for this study, namely those living in the household with the PSSN beneficiary at the time of interview. Thus, youth who may have lived in PSSN households prior to baseline but who subsequently moved out to start their own households through marriage and cohabitation were excluded from our sample. This is because there had been no retargeting of or enrolment in the PSSN between its roll-out in 2015 and our baseline in 2017. As such, any new households formed by the marriage of adolescents from PSSN households were subsequently unlikely to be part of PSSN, thus explaining the low rates of marriage and cohabitation among adolescents in our sample.

The intervention had no effects on marriage/cohabitation (*see Table 11.1*). This is consistent with findings from previous rounds. However, the intervention led to a slight decrease in the probability that youth in the treatment group had a girlfriend or boyfriend in round four (5.4 percentage point decrease). When analysed by gender, we observed that this negative impact in intervention villages was driven by the male sample (who were 7.1 percentage

41 An estimated 26.3 per cent of those aged 15–19 years from the poorest wealth quintile have ever been married (Ministry of Health et al., 2016).

points less likely to have a girlfriend/boyfriend compared to youth in control villages; *see Table C.11.1, Appendix C*). Moreover, males in the sample groups were also more likely to be married or have a cohabitating partner as a result of the cash-plus intervention. Impacts among females were not significant. When looking at the attrition analysis (*see Table B.22, Appendix B*), we observed that treatment-group youth in the panel sample were less likely to have been married at baseline than those in the control group ($p < .05$), and thus impact estimates on this outcome could suffer from threats to validity, although it could also mean that impacts on marriage were underestimated and that the intervention increased marriage rates to a higher extent than the findings suggest.

Table 11.1. Cash-plus impacts on partner/relationship indicators (ANCOVA)

	ITT IMPACT	ATT IMPACT	BASELINE MEAN	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)
Ever had a spouse/ cohabiting partner	0.044	0.115	0.011	0.140	0.165
	(0.02)	(0.06)			
Has a girlfriend/boyfriend	-0.054*	-0.141*	0.173	0.392	0.338
	(0.02)	(0.06)			
N	2,053	2,052	2,052	1,064	989

Notes: Linear models were estimated for the panel of youth interviewed both at baseline and in round four. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01.

11.2 Sexual debut and characteristics of first sex

Over the course of the study, we examined the impacts of the intervention on sexual debut among those who had not sexually debuted at baseline. Among this subsample (n = 1,707), we observed that 48.7 per cent and 46.5 per cent of the control and treatment groups, respectively, had had sexual intercourse by round four (*see Table 11.2*). The average age of sexual debut was 17.9 years and 17.8 years among control and treatment groups, respectively. Among those who had sexually debuted, 7.7 per cent and 6.5 per cent of control and treatment groups, respectively, reported that they had been forced, pressured or tricked into having their first sexual experience. Although impact coefficients were negative, they were not statistically significant; therefore, we cannot conclude that the cash-plus programme had any effect on these outcomes. Outcomes were balanced at baseline among the panel sample.

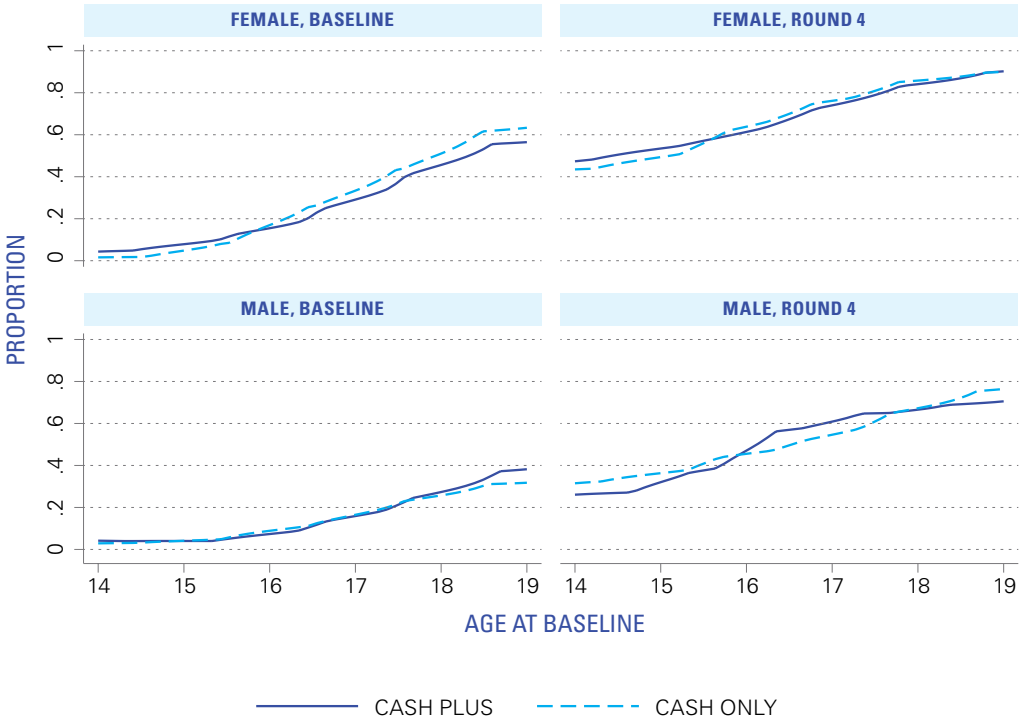
When analysing these outcomes by gender (*see Table C.11.2, Appendix C)*, we did not observe any impacts, although, in round three, the programme had slightly decreased the age of sexual debut among females by approximately four months on average. By round four, however, females in the control group had caught up with those in the treatment group in terms of sexual debut, and the adverse impacts revealed in the previous round were not sustained.

Table 11.2. Cash-plus impacts on first sexual intercourse indicators (single difference)

	ITT IMPACT	ATT IMPACT	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)
Ever had sex	-0.010	-0.028	0.487	0.465
	(0.03)	(0.08)		
N	1,707	1,707	879	828
Age at time of first sexual intercourse (in years)	-0.166	-0.423	17.979	17.794
	(0.12)	(0.31)		
N	812	812	428	384
First sexual intercourse forced/pressured/ tricked – among sexually debuted	-0.009	-0.023	0.077	0.065
	(0.02)	(0.04)		
N	812	812	428	384

Notes: Linear models were estimated for the panel of youth interviewed both at baseline and in round four. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01. Youth who reported sexual debut at baseline were excluded from the analysis.

Figure 11.1: Proportion of youth who ever had sex, by time and gender



The prevalence of youth who had sexual debut increased over time: Among females, more than 80 per cent of those aged 18–19 years at baseline (22–23 years at the time of the interview) had sexually debuted, compared to under 20 per cent of those aged 14 years at baseline (*see Figure 11.1*). Among males, rates of sexual debut were slightly lower: 70 percent in round four (among those who were 19 years old at baseline).

11.3 Fertility

Pregnancy, a fertility-related outcome, was one of the topics covered in the cash-plus curriculum. Training included discussions on what needs to be done if adolescent females become pregnant (or if males had a pregnant partner), the risks of unsafe abortion and ways to ensure optimum care before, during and after giving birth. It was posited that the combination of this training alongside strengthened health facilities and facilitation of linkages may delay pregnancy, although existing evidence on this topic is mixed.

We asked female respondents whether they were currently pregnant or if they had ever been pregnant. To examine programme effects at round four, we excluded females who had reported ever being pregnant and males who had pregnant partners at baseline. By round four, 40 per cent and 39.4 per cent of females in the control and treatment groups, respectively, had been pregnant (*see Table 11.3*). Approximately 6 per cent were pregnant at the time of the round four survey. As in rounds two and three, there were no impacts on these outcomes. Among males, only 4.9 per cent and 9.2 per cent of the control and treatment groups, respectively, reported their partner ever being pregnant, and the cash-plus intervention led to a higher probability of males having a pregnant partner in round four. This finding could be driven by the increase in marriage among cash-plus participants, also in relation to their older age. A higher number of cash-plus males had a pregnant partner compared to control-group males, and the majority who had a pregnant partner were either married or in a relationship (*see Tables 11.4. and 11.5.*). Married men were also overrepresented among the treatment group. These indicators were balanced at baseline.

Table 11.3. Cash-plus impacts on fertility indicators (single difference)

	ITT IMPACT	ATT IMPACT	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)
Ever pregnant	-0.013	-0.029	0.400	0.394
	(0.04)	(0.08)		
N	824	824	448	376
Currently pregnant	-0.010	-0.022	0.065	0.058
	(0.02)	(0.04)		
N	793	793	428	365
Males: had pregnant partner	0.048*	0.163*	0.049	0.092
	(0.02)	(0.07)		
N	1,117	1,116	551	566

Notes: Linear models were estimated for the panel of youth interviewed both at baseline and in round four. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01. Youth who reported fertility indicators at baseline were excluded from the analysis.

In this context, the burden to prevent pregnancy and mitigate its consequences are often gendered. One of the mentors explained how mothers feel responsible for urging their daughters to prevent early pregnancy and discuss this extensively with them, but that neither mothers nor fathers often have similar discussions with their sons about preventing pregnancy:

R: [A daughter] gets so many explanations from the parent (mother), because the [parent] knows that if [she doesn't] tell her, [the daughter] might experience danger. And once she gets into danger, it becomes a mother's burden. So it is possible that the source of understand begins at home from the parents, right? [The girl] has been taught so many things concerning how [to] protect herself after she starts menstruating, what can happen if she involve[es] herself in a relationship, what are the dangers. She gets the knowledge from her parent, so when she comes to the session with trainers, it becomes an addition. But for a [son], his father is busy and does not have time to talk to him.

(Mufindi Mentor 1, 47 years old, male, Ihawaga, Mufindi, 26 January 2021)

This gap in information was one area that the cash-plus intervention helped to address.

Additionally, the burden of raising a child tends to fall more often to females than males, as the latter can deny responsibility in some cases. This not only has financial implications but also implications for mental health. In one case, a female recalled how frustrated she had been after the male responsible for her pregnancy had rejected her (female, 20 years old, Village 1113, 29 January 2021). She expressed how she was emotionally hurt after the male responsible left her and denied any responsibility for the pregnancy.

Table 11.4. Marital status among men with a pregnant partner (cash-plus participants)

HAD A PREGNANT PARTNER	SINGLE	MARRIED	IN A RELATIONSHIP	TOTAL
Yes	7 (13%)	29 (56%)	16 (31%)	52 (100%)
No	68 (31%)	16 (7%)	133 (61%)	217 (100%)
Total	**75 (28%)**	**45 (17%)**	**149 (55%)**	**269 (100%)**

Table 11.5. Marital status among men who had a pregnant partner (control participants)

HAD A PREGNANT PARTNER	SINGLE	MARRIED	IN A RELATIONSHIP	TOTAL
Yes	3 (10%)	15 (50%)	12 (40%)	30 (100%)
No	69 (28%)	8 (3%)	170 (69%)	247 (100%)
Total	**72 (26%)**	**23 (8%)**	**182 (66%)**	**277 (100%)**

11.4 Contraceptive knowledge and use

The cash-plus programme curriculum covered family planning topics, including:

- the most common forms of family planning available and their advantages and disadvantages
- how to choose the best method of family planning and access available family-planning services
- an explanation of the double protection provided by condoms and how to negotiate condom use with a partner.

We examined the impacts of the intervention on contraception-related knowledge and use.[42] We analysed indicators for knowledge and use differently. For knowledge we used longitudinal data and examined changes over time using the ANCOVA model. For contraceptive use, since individual adolescents had had their first sexual experience at different times throughout our study and we wanted to capture the impact on any individual who had sexually debuted by round four, we used a single difference approach.

There was a high level of knowledge about contraceptive methods in round four, increasing from a baseline average of 77.7 per cent for both treatment and control groups to 97.2 per cent and 95.9 per cent for control and treatment groups, respectively (*see Table 11.6*). In both rounds two and three, we observed increased knowledge of contraceptives as a result of the intervention. By round four, given the high levels of knowledge in both treatment and control groups, there was little difference between the two groups and therefore we did not identify programme impacts. Moreover, given that the sample had aged and was now 21 years old on average, it was not surprising that both cash-plus participants and the control group had become more knowledge about this topic. For example, by round four, the understanding that females could be given condoms and other contraceptives had become widely established:

I: Aren't females given condoms?

R: They are given [condoms].

I: Are they also given?

R: Yes.

I: What obstacles do females face in getting these services? These coils and pills?

R: Pregnancies. Getting pregnant, getting infected with diseases such as HIV. It can happen, therefore anyone with awareness needs to protect themselves.

42 For the purpose of our analyses, modern methods were defined as male or female sterilization, injections, implants, intrauterine devices, pills, condoms (male or female), diaphragms, foam or jelly, the lactational amenorrhea method and emergency contraceptive pills. In contrast, non-modern methods, which have lower efficacy rates, include withdrawal and the rhythm method.

I: Now, what challenges do they face in accessing these services in their community? These coils, pills, counselling…

R: It is their decision to go there. They may decide to use those methods.

I: And what about males? What challenges do they face in accessing these family-planning services?

R: Failing to plan with their partners concerning pregnancies and various diseases.

I: What barriers do you think females and males face in accessing these services?

R: There are no barriers.

(Interview with male, 23 years old, single, Standard VII, Village 1192, 30 January 2021)

Despite these high levels of knowledge about modern contraceptive methods, there were indications of hesitation about the use of some methods, especially contraceptive pills. One of the mentors said, "The girls' challenges were just those contraceptive pills …, many said we can't [use them], we will forget [to take them]" (Mentor 2, Mbaka, Rungwe, 8 February 2021). In qualitative interviews, mentors stated that injections were the most commonly used contraceptive method.

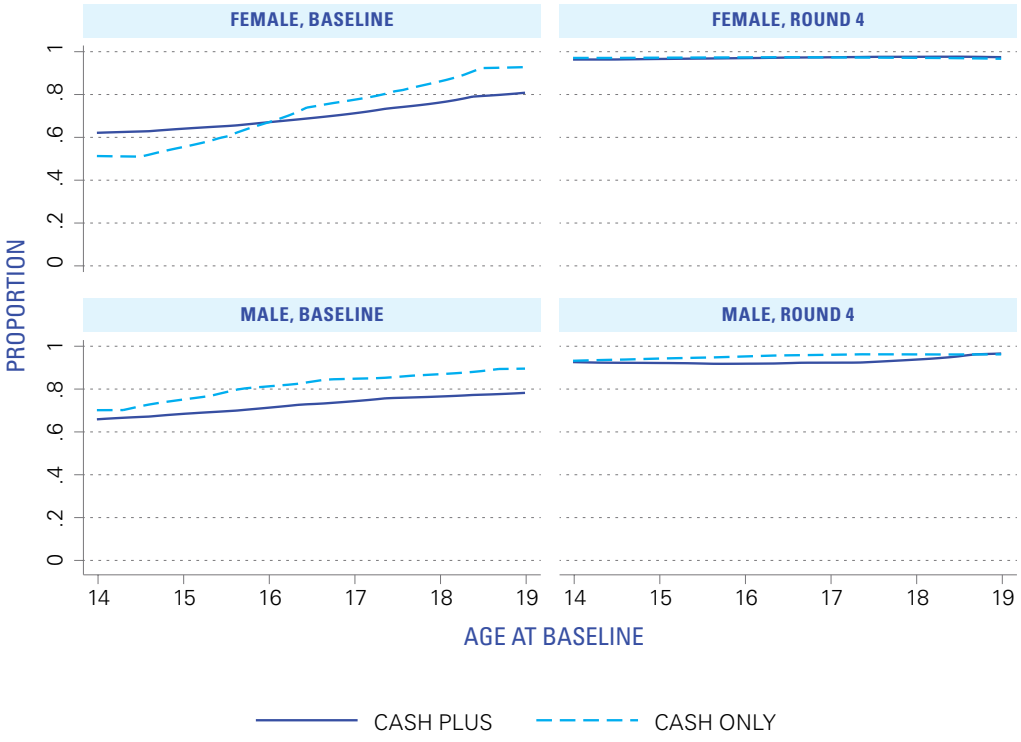
We did not observe significant programme effects by gender (*see Table C.11.3, Appendix C*) although females had slightly higher levels of contraceptive knowledge than males, despite having a lower level of contraceptive knowledge at baseline (*see Figure 11.2*).

Table 11.6. Cash-plus impacts on contraceptive knowledge (ANCOVA)

	ITT IMPACT	ATT IMPACT	BASELINE MEAN	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)
Has knowledge about contraceptives	-0.009	-0.027	0.777	0.972	0.959
	(0.01)	(0.02)			
Has knowledge about modern contraceptives	-0.010	-0.029	0.732	0.969	0.955
	(0.01)	(0.03)			
N	2,026	2,025	2,025	1,051	975

Notes: Linear models were estimated for the panel of youth interviewed both at baseline and in round four. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01.

Figure 11.2: Proportion of youth having knowledge about modern contraceptives, by time and gender



The intervention did not increase use of contraceptive methods (*see Table 11.7*). When analysing results by gender, we also found no significant programme impacts on contraceptive use (*see Table C.11.4, Appendix C*). This is consistent with the findings in previous survey rounds, indicating that the intervention was unable to overcome barriers, such as the poor supply of contraception, including condoms, and conservative social norms. The cash-plus programme did not ensure that contraceptive supplies were available, and supply-side challenges beyond the scope of this intervention still remain. It is also important to mention that among adolescents who had sexually debuted, we observed that 42–46 per cent used a condom during the most recent sexual intercourse, and 62–65 per cent were using any contraceptive method (60 per cent were using a modern method). These rates were much higher than nationally estimated modern-contraceptive usage rates among married and sexually active, unmarried females aged 15–19 years (8.6 per cent) and 20–24 years (28.9 per cent). Among all females aged 15–49, modern-contraceptive usage rates were 32.1 per cent in Iringa and 45 per cent in Mbeya, according to the most recent Demographic and Health Survey (DHS) (Ministry of Health et al., 2016).

Table 11.7. Cash-plus impacts on contraceptive use (single difference)

	ITT IMPACT	ATT IMPACT	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)
Used condom during most recent sexual intercourse	-0.053	-0.136	0.461	0.419
	(0.03)	(0.09)		
Currently using contraceptives – among sexually debuted	-0.038	-0.097	0.653	0.617
	(0.03)	(0.09)		
Currently using modern contraceptives – among sexually debuted	-0.038	-0.097	0.643	0.607
	(0.03)	(0.09)		
N	1,132	1,131	597	535

Notes: Linear models were estimated for the panel of youth interviewed both at baseline and in round four. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01.

Both quantitative and qualitative data indicated that the cash-plus intervention did not lead to an increase in the use of contraceptive methods. In one example, a service provider, trained by the programme, recounted how he had counselled a young pregnant female on the risks of having unsafe (i.e., unprotected) sex. She had said "I did not know" and she also did not know that she could demand safe sex. The service provider indicated thatother youth had indicated a similar lack of knowledge. (Clinical Officer, Mafinga, 3 August 2021).

In round four, we added questions on pregnancy intentions among females, concerning their current or latest pregnancy. To assess whether the most recent pregnancy was unintended, we asked whether they wanted to become pregnant at the time of their current or latest pregnancy. We also asked whether they wanted to have a child later or did not want any more children. If they answered that they would have preferred to have a child later or did not want more children, then the pregnancy was coded as mistimed (instead of unintended). We observed that among those reporting pregnancy, 59.8 per cent of the control group and 61.5 per cent of the treatment group had a recent mistimed pregnancy, and that 57.8 per cent of the control group and 59.7 per cent of the treatment group had an unintended pregnancy (*see Table 11.8*). Despite higher than average contraceptive use in this sample, as reported above, these findings underscore that there is still an unmet need for contraceptives.

In-depth interviews and focus groups with mentors and ToTs highlighted issues related to pregnancy intentions and reproductive autonomy among adolescent girls. For example:

We still [see] new [HIV] infections.

We cannot fully know how programme recipients have absorbed the training, since we observe that, although we trained her, an adolescent/youth has become pregnant,

but we need to know whether she got [pregnant] intentionally, if she followed all procedures and decided that she now wanted to get pregnant, and if she has tested for HIV with her partner and they both intended the pregnancy. All these are issues that we need to understand further, including... did the person care for the health of the partner or was the pregnancy forced?

(Rungwe ToTs, focus group discussion, 3 August 2021)

In round four, we also added questions on birth size, a proxy measure of birthweight, an important foetal-health outcome. Birthweight is influenced by maternal health and behaviours, environmental conditions and socioeconomic circumstances, and it is linked to the short- and long-term well-being of the infant (Buehler et al., 1987; De Bernabé et al., 2004; Horbar et al., 2002; Kramer, 1987; Lima et al., 1999; Mishra et al., 2004; Susser, 1991). Given that some of the determinants of birthweight are linked to economic-security related outcomes such as food security (Bakhtsiyarava et al., 2018; Grace et al., 2015), we posited that the cash-plus intervention may reduce the probability of reported small size at birth. We found that 5.5 per cent and 10.4 per cent of the control and treatment groups, respectively, reported small or very small birthweights for their most recent pregnancy. However, there were no programme impacts on this outcome.

Table 11.8. Cash-plus impacts on pregnancy intentions and birth size (single difference)

	ITT IMPACT	ATT IMPACT	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)
Mistimed latest or current pregnancy	0.015	0.032	0.598	0.615
	(0.05)	(0.10)		
N	421	421	234	187
Had an unintended pregnancy (among those who had ever been pregnant)	0.008	0.018	0.578	0.597
	(0.06)	(0.12)		
N	464	464	258	206
Had an unintended pregnancy (whole sample)	-0.007	-0.015	0.281	0.281
	(0.03)	(0.07)		
N	967	967	530	437
Birth size (small or very small)	0.049	0.107	0.055	0.104
	(0.02)	(0.05)		
N	456	456	254	202

Notes: Linear models were estimated for the panel of youth interviewed both at baseline and in round four. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01.

11.5 Sexual behaviours and HIV risk

Certain risky sexual behaviours, such as concurrent partners, increasing number of partners, age-disparate relationships, failure to use a condom and early sexual debut can increase HIV risk. Our conceptual framework posited that increased economic security combined with increased health capacities would decrease incentives to engage in these risky behaviours.

The training discussed how certain behaviours or situations related to HIV risk, including having more than one concurrent sexual partner, frequently changing sexual partners, having sexual contact without a condom and/or without testing, having a sexual partner who was much older. Community norms and practices, such as the idea that females are often expected to have sex with older males who are more sexually experienced, were also discussed in the training.

Trainers also discussed how the community has a responsibility to: (1) ensure that females are protected from sexual harassment and abuse by males in the community and (2) ensure females are not put in a position where they are tempted to have sex for material reasons (e.g., hunger or having to feed younger siblings). The training also provided information on females' increased biological and social vulnerability to contracting HIV and, among those who were sexually active, the need for physical protection (condoms) and negotiation skills. Some of the male youth maintained that they could not be convinced to take an HIV test, as demonstrated by this extract from an interview with a females respondent:

R: He just believes that I can't get that [HIV]. So, he builds his faith; he can't even go and get these services.

I: What are the things that make young people in general reluctant to go to get these services?

R: It's just… faith. Only faith is the biggest thing.

(Interview with female, 18 years, single, Village 2321, 5 February 2021)

The programme intervention, however, registered a level of change in such attitudes. To assess programme impacts on HIV risk behaviours, we asked questions about sexual behaviour in the previous 12 months, including number of partners, concurrent relationships, condom use and disparate age of partner during the most recent sexual intercourse. These sexual behaviour questions were put to those adolescents who had sexually debuted only. For those who debuted between survey rounds, we recoded missing baseline values to zero for longitudinal analyses. Attrition and baseline balance analyses for these outcomes refer to those with data reported at baseline only.

Between baseline and round four, the average number of sexual partners in the previous 12 months increased from 0.32 to 1.2 partners among those who had sexually debuted (n = 1,131) (*see Table 11.9*). This was expected as the sample had aged. It is interesting to note, however, that in round three the average number of sexual partners was higher at 1.4. Among the sample analysed, 6.4 per cent and 7.5 per cent of youth in the treatment and control groups, respectively, reported concurrent sexual relationships over the previous 12 months. Moreover, 24.7 per cent and 19.9 per cent of the control and treatment groups, respectively, reported having a partner who was five or more years older them. Only 4.3 per cent and 4.5 per cent of control and treatment groups, respectively, reported having a partner who was ten or more years older than them. There were no programme impacts on these indicators (consistent with previous rounds), including when evaluated by gender (*see Table C.11.5, Appendix C*), and all indicators, with the exception of an age difference of five or more years, were balanced at baseline among the panel sample.

Table 11.9. Impacts on recent sexual behaviour indicators (ANCOVA)

	ITT IMPACT	ATT IMPACT	BASELINE MEAN	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)
Number of sexual partners in previous 12 months	0.123	0.338	0.324	1.109	1.264
	(0.16)	(0.40)			
Among those who had ever had sex: has had concurrent sexual relationships in previous 12 months	-0.016	-0.041	0.014	0.075	0.064
	(0.02)	(0.04)			
N	1,132	1,131	1,131	597	535
Most recent sexual intercourse: partner five or more years older than respondent	-0.032	-0.081	0.045	0.247	0.199
	(0.02)	(0.06)			
Most recent sexual intercourse: partner 10 or more years older than respondent	0.005	0.013	0.006	0.043	0.045
	(0.01)	(0.03)			
N	1,069	1,068	1,068	562	507

Notes: Linear models were estimated for the panel of youth interviewed both at baseline and in round four. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01. Missing values at baseline were replaced with zero.

11.6 Transactional sex

Transactional sex is an adverse outcome under the umbrella of exploitation and abuse. The 12-week training curriculum covered awareness of economic incentives for sex and having sex for material reasons, such as hunger or having to feed younger siblings. Recognizing that poverty often drives incentives for transactional sex in order to meet basic needs and obtain material wants (Kamndaya et al., 2016), and because of the subsequent risks, including HIV risk, abuse and violence, low sexual relationship power, alcohol use, multiple partners and non-use of condoms (Wamoyi et al., 2019), we assessed transactional sex indicators among the youth in our study.

To collect information on transactional sex, we used an innovative tool[43] developed by Wamoyi et al. (2019).[44] In line with the definition of transactional sex provided by Wamoyi et al. (2019), we analysed survey questions among the subset of unmarried youth at round four.[45] We asked youth to list their motivations for starting their current or most recent relationship, and created a variable indicating whether any of these reasons were financial. Then we asked: if they had been given money by their current or most recent partner; whether they would leave the relationship if the partner did not financially support them; and whether they had provided money, favours or gifts for sex in the previous 12 months. Among females, we provided impact estimates on a transactional sex index, constructed as an additive scale that included all indicators except 'provided money, favours or gifts for sex'. Among males, we provided impact estimates on that indicator.[46]

In round three, we did not observe impacts of the intervention on transactional sex. We present our findings among unmarried adolescents who had sexually debuted by round four (479 males and 381 females) (*see Table 11.10*). Among males, 14.5 per cent and 11.6 per cent of the control and treatment groups, respectively, reported that they had provided money, favours or gifts for sex in the 12 months before the interview. Among females, the average scores of the index were 1.4 and 1.3 among control and treatment groups, respectively. There were no programme impacts on this indicator. These indicators were balanced at baseline among the panel sample and there was no evidence of selective attrition.

43 While this tool was not published until 2019, study co-author Meghna Ranganathan provided us with the questionnaire items in 2017, prior to our baseline, and so we implemented these measures in all rounds. Analyses in rounds three and four included unmarried youth only in line with this definition; however, previous rounds (baseline and round two) included all youth and are therefore not directly comparable.

44 The authors of this new measure highlighted widespread misunderstanding of both transactional sex and its measurement, including how it is often confused with sex work. They stressed that transactional sex refers to informal sexual-exchange relationships, different from sex work, and formally define transactional sex as "non-commercial, nonmarital sexual relationships motivated by an implicit assumption that sex will be exchanged for material support or other benefits." They tested the newly developed measures in the United Republic of Tanzania and Uganda. In the former country, the question about financial motivations for 'leaving' a relationship was somewhat problematic, and thus effects on this indicator should be interpreted with caution.

45 While 'transactional sex' may also refer to extramarital relationships among married individuals, we did not have the information to distinguish reporting on marital and extramarital relationships in our data, and thus we excluded those who were married.

46 Our use of the additive scale was based on input from one of the study authors of the Wamoyi et al. (2019) article. The index had a Cronbach's alpha of 0.56 at baseline and in round four.

Table 11.10. Cash-plus impacts on transactional sex indicators among unmarried adolescents who had sexually debuted (ANCOVA)

	ITT IMPACT	ATT IMPACT	BASELINE MEAN	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)
Provided money, favours, or gifts for sex in the previous 12 months – males only	-0.027	-0.084	0.021	0.145	0.116
	(0.04)	(0.12)			
N	479	478	478	255	224
Transactional sex index (additive; range 0–3) – females only	-0.077	-0.164	0.255	1.366	1.292
	(0.12)	(0.25)			
N	381	381	381	213	168

Notes: Linear models were estimated for the panel of youth interviewed both at baseline and in round four. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01. Missing values at baseline were replaced with zero.

11.7 HIV knowledge

Much of the health-related life-skills training focussed on HIV knowledge, specifically prevention, testing and treatment. We assessed whether adolescents had heard about HIV, from what source and whether they knew HIV-related facts. Two sets of analyses were run on these HIV knowledge indicators: (1) single difference analysis for indicators not collected at baseline ('knows sex with one uninfected monogamous partner can reduce risk of HIV'; 'knows mosquitos do not transfer HIV'; and 'knows regular condom use reduces HIV risk') and (2) ANCOVA models for items included in all rounds.

By round four, differences in HIV knowledge between the control and the treatment groups were not statistically significant, despite the intervention increasing HIV-related knowledge, that is, knowing that regular condom use reduces HIV risk, in round three. In that round, 69.4 per cent and 74.5 per cent of the control and treatment groups, respectively, possessed accurate knowledge on this item, whereas by round four these figures had increased to 74.6 per cent and 76.3 per cent, respectively (*see Table 11.11*). This indicates that the control group had caught up with the treatment group between rounds three and four. This does not mean that the intervention was ineffective. Indeed, the fact that youth acquired this knowledge earlier as a result of the cash-plus intervention might imply better outcomes or higher levels of well-being later on.

Table 11.11. Cash-plus impacts on HIV knowledge (single difference)

	ITT IMPACT	ATT IMPACT	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)
Knows sex with one uninfected monogamous partner can reduce risk of HIV	-0.022	-0.057	0.725	0.705
	(0.03)	(0.08)		
Knows mosquitos do not transfer HIV	-0.028	-0.073	0.876	0.845
	(0.02)	(0.05)		
Knows regular condom use reduces HIV risk	0.019	0.050	0.746	0.763
	(0.03)	(0.08)		
Knows HIV is not transferred through food	-0.032	-0.085	0.865	0.828
	(0.02)	(0.05)		
N	2,044	2,043	1,058	986

Notes: Linear models were estimated for the panel of youth interviewed both at baseline and in round four. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01.

The qualitative interviews with programme mentors similarly illustrated the high level of knowledge about HIV and STIs among youth. Mentors pointed to the increased tendency of youth to seek testing and treatment services for HIV and STIs. However, they noted that not all youth sought testing and indicated that this might be due to a lack of self-confidence: "Some, for example,… perhaps think that if they go to test, they would be seen as promiscuous. It is all just timidity, lacking self-confidence." (Peer educator 1,_Rungwe,, 5 February 2021)

Turning to HIV knowledge indicators measured at all rounds, we found no programme impacts (*see Table 11.12*). In round four, we observed that 81 per cent of the sample knew that an attractive person could have HIV. Furthermore, 72.7 per cent and 70.2 per cent of control and treatment groups, respectively, knew that a mother could transmit HIV to her child. Finally, 89 per cent and 88 per cent of the control and treatment groups, respectively, knew that there are medicines that can help an HIV-positive person to live longer. These indicators were balanced at baseline with no indication of selective attrition.

Table 11.12. Cash-plus impacts on HIV knowledge (ANCOVA)

	ITT IMPACT	ATT IMPACT	BASELINE MEAN	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)
Knows that an attractive person can have HIV	0.001	0.003	0.807	0.810	0.807
	(0.02)	(0.05)			
Knows that a mother can transmit HIV to her child	-0.019	-0.052	0.693	0.727	0.702
	(0.02)	(0.06)			
Knows there are medicines that help an HIV-positive person to live longer	-0.007	-0.018	0.880	0.891	0.882
	(0.02)	(0.05)			
N	1,988	1,987	1,987	1,025	963

Notes: Linear models were estimated for the panel of youth interviewed both at baseline and in round four. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01.

When analysing HIV knowledge separately by gender, we did not observe any programme impacts except on one indicator: a smaller percentage of females knew that HIV is not transferred through food (*see Tables C.11.6 and C.11.7, Appendix C*). It is unclear how the intervention would have adversely affected this outcome and, as this is inconsistent with findings from previous rounds that were administered closer to the face-to-face training, this finding should be interpreted with caution.

11.8 Perceived HIV risk and testing

Next, we examined adolescents' perceived HIV risk and testing history. We asked youth about their self-perceived risk of contracting HIV and then asked whether they had: (1) been tested for HIV (during their lifetime or in the previous 12 months) and (2) whether they had received their test results. We did not ask adolescents to report the outcome of the test, nor did we directly ask adolescents about their HIV status. Most adolescents believed their HIV risk to be zero (72 per cent and 78 per cent of control and treatment groups, respectively; *see Table 11.13*). This was down from 83.9 per cent at baseline, indicating that perceived HIV risk has increased over the years among this sample. Only 6.9 per cent and 4.7 per cent of control and treatment groups, respectively, believed their risk was moderate or high. Less than one in four (21.1 per cent and 17.2 per cent among control and treatment groups, respectively) believed their risk to be low. In round three, there were no programme impacts on perceived HIV risk; however, by round four, the intervention had increased the likelihood of adolescents reporting their HIV risk to be zero. This could be related to the positive impacts on HIV testing revealed in the previous round, when the intervention increased HIV testing in the previous 12 months by 6.2 percentage points.

By round four, however, we did not observe significant impacts on HIV testing or in receiving results (among those who were tested). Nevertheless, we observed that rates of HIV testing (both during participants' lifetimes and in the previous year) had increased over time. At baseline, 44 per cent of youth had ever tested for HIV and, by round four, this had increased to 72.5 per cent in the control group and 74.2 per cent in the treatment group, respectively. Testing for HIV in the previous 12 months also increased over time, and test rates were higher in round four than round three, meaning the control group caught up with the treatment group after the intervention. These indicators were balanced at baseline and there was no indication of selective attrition.

Table 11.13. Cash-plus impacts on HIV risk indicators (ANCOVA)

	ITT IMPACT	ATT IMPACT	BASELINE MEAN	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)
Perceived HIV risk: moderate/ high	-0.020	-0.053	0.028	0.069	0.047
	(0.01)	(0.03)			
N	1,998	1,997	1,997	1,037	961
Perceived HIV risk: low	-0.036	-0.098	0.133	0.211	0.172
	(0.02)	(0.06)			
N	1,998	1,997	1,997	1,037	961
Perceived HIV risk: zero	0.056*	0.151*	0.839	0.719	0.781
	(0.02)	(0.07)			
N	1,998	1,997	1,997	1,037	961
Tested for HIV: during lifetime	0.027	0.070	0.441	0.725	0.742
	(0.02)	(0.06)			
N	2,043	2,042	2,042	1,057	986
Tested for HIV: in previous 12 months	0.032	0.085	0.296	0.527	0.548
	(0.02)	(0.06)			
N	2,053	2,052	2,052	1,064	989
Received HIV test results: in previous 12 months	-0.006	-0.014	0.676	0.774	0.760
	(0.03)	(0.07)			
N	764	763	763	385	379

Notes: Linear models were estimated for the panel of youth interviewed both at baseline and in round four. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01.

From the qualitative interviews, we noted that some hesitation concerning HIV testing persisted among a few individuals, probably due to fear rather than misinformation or lack of information, as the extract below suggests:

I: In your view, what is causing youth to hesitate to use HIV testing services here in your village?

R: You might find [some] are troublesome, maybe; others are scared to go for testing. Maybe that's why they hesitate; they might go there [to a clinic] maybe; they might be found with it [HIV] already. If they are found with it, they start to be affected… psychologically because… you might find they work hard, then they know for sure to say I am like this… sick, I am like this; so, they are not OK; so, you find sometimes they hesitate to go for testing. So, you find they prefer to stay like that, I don't know.

I: When you say others are troublesome, what do you mean?

R: That is, someone [who] has many wives [and who] goes out with many women.

(Interview with female, 17 years old, completed Form IV, Village 1073, 9 February 2021)

This respondent's comments imply that knowledge about HIV is high among the youth, but they might not all have the courage to face it. At the same time, however, mentors believed that the intervention was increasing HIV awareness, which is supported by the impacts revealed in rounds two and three of the evaluation, and increasing knowledge of where to access care. One of the study participants reported:

Honestly, the awareness is high and they [youth] show that; because later you find that once they note that you can give them information, a person can approach you saying, "I need to see you; when can I see you?" [about] a thing that was very hard to experience before. This shows that she or he did not have a place to approach for such needs [before].

(Key Informant Interview in Mufindi, 3 August 2021).

When we analysed perceptions and testing by gender, we did not observe any significant programme impacts (*see Table C.11.8, Appendix C*). It is worth noting, however, that while the increase in HIV testing due to the cash-plus intervention in round three was driven by the male sample, the rates of testing were higher among females in both round three and round four. Among this group, rates of lifetime testing increased from 28 per cent at baseline to 80.4 per cent and 83.5 per cent in control and treatment groups, respectively, in round 4. Meanwhile, among males, it increased from 23 per cent to 65.2 per cent and 67.4 per cent in control and treatment villages, respectively.

12. Access to sexual and reproductive health services

Key findings

- There were sustained programme impacts on male use of health services, consistent with findings from round three.
- The cash-plus intervention increased the likelihood that adolescents knew that they could seek contraception and pregnancy tests at a dispensary, and this impact was driven by the female sample.
- Among males, the most common reason for seeking services was for condoms, while among females, it was for seeking contraception, including condoms. A significant proportion of females, however, also sought services for pregnancy, maternity or gynaecological examinations.
- Rates of health-insurance coverage were low in this sample (8.5 per cent to 11 per cent), and there were no programme impacts on this outcome.

A recent review concluded that few studies have examined the impacts of government-implemented cash transfers on adolescent use of health services (Cirillo et al., 2021). Among studies that have examined this outcome, three reported positive impacts of cash transfers on the use of health services, while two found no impact. A related body of literature has examined the impacts of 'bundled' interventions that combine economic strengthening (including microcredit, cash transfers or savings accounts) with life-skills training and/or health-related programmes (e.g., vouchers or information about services). To date, the evidence on the impact of these programmes, which have only been implemented by non-governmental actors, has been mixed. These programmes have been almost exclusively targeted at females, while excluding males, due, in part, to the former's heightened vulnerability to reproductive health-related risks, violence, early marriage and early pregnancy. Several of these programmes have been found to improve SRH knowledge but not access to services or subsequent health outcomes (Austrian, Hewett, et al., 2016; Austrian et al., 2018; Dunbar et al., 2014). These programmes have tended to address demand-side barriers to accessing health, including poverty and lack of knowledge about available services. At the same time, there is a large body of evidence highlighting supply-side barriers to adolescent use of health services. According to providers, supply-side barriers to service use among adolescents include: lack of properly trained, adolescent-sensitive staff; infrastructure shortages; lack of essential supplies; and geographic maldistribution of trained providers (Boamah-Kaali et al., 2018; Geary et al., 2014; Godia et al., 2013; Homer et al., 2018; Müller et al., 2016). Factors highlighted as enabling adolescent use of services include short waiting times, the ability to obtain all services at one site, low costs and positive provider attitudes (Erulkar et al., 2005; Feleke et al., 2013).

In consideration of these barriers and evidence from previous studies, it was expected that the cash- plus intervention might increase adolescent use of health services through: reducing cost barriers (through economic strengthening components), improving information about available services (through face-to-face training and mentoring), facilitating linkages to services (through mentoring and referrals) and strengthening adolescent-friendly characteristics of existing services.

We examined a range of health-service use outcomes, including: visiting a health facility (e.g., dispensary, clinic, healthcare centre or hospital) for SRH services; the reason for the visit; whether participants had discussed contraception with a healthcare provider during their most recent visit, regardless of the reason for the visit; and perceptions of service quality (e.g., friendly staff, adolescent felt comfortable asking questions, questions were adequately addressed and there was sufficient confidentiality). In addition, we asked whether the adolescent was currently enrolled in a health-insurance scheme (e.g., the Community Health Fund (CHF – a form of community-based health insurance), the National Health Insurance Fund or other private health insurance). In rural districts of the United Republic of Tanzania, CHF enrolment is at the household-level. That is, if the household is enrolled, all its members are covered by the insurance scheme. However, in urban settings, coverage is at the individual level, so members of the same household may have different insurance coverage status. For the National Health Insurance Fund, which mainly covers formal sector employees, enrolment covers a family (defined as mother, father and up to four dependents).

We found that the cash-plus intervention increased the likelihood that adolescents knew that they could seek contraception and pregnancy tests at a dispensary by 3.8 percentage points and 4.4 percentage points, respectively (*see Table 12.1*). There were no impacts on knowledge about other places to obtain contraception.

Table 12.1. Cash-plus impacts on knowledge of places to contraception (single difference)

	ITT IMPACT	ATT IMPACT	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)
Contraception at clinic	0.019	0.048	0.925	0.941
	(0.01)	(0.03)		
Contraception at kiosk/shop	-0.012	-0.031	0.081	0.069
	(0.01)	(0.04)		
Contraception at pharmacy	-0.042	-0.111	0.323	0.277
	(0.03)	(0.08)		
Contraception at dispensary	0.038*	0.100*	0.087	0.123
	(0.02)	(0.05)		
Contraception – do not know	-0.007	-0.015	0.038	0.033

	ITT IMPACT	ATT IMPACT	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)
	(0.01)	(0.02)		
Condom at clinic	0.021	0.053	0.830	0.852
	(0.02)	(0.05)		
Condom at kiosk/shop	-0.006	-0.015	0.417	0.407
	(0.03)	(0.08)		
Condom at pharmacy	-0.002	-0.007	0.591	0.592
	(0.03)	(0.08)		
Condom at dispensary	0.033	0.088	0.097	0.128
	(0.02)	(0.05)		
Condom – do not know	0.000	0.001	0.023	0.023
	(0.01)	(0.02)		
Pregnancy test at clinic	0.002	0.004	0.973	0.974
	(0.01)	(0.02)		
Pregnancy test at kiosk/shop	0.006	0.015	0.028	0.034
	(0.01)	(0.02)		
Pregnancy test at pharmacy	-0.016	-0.042	0.134	0.118
	(0.01)	(0.04)		
Pregnancy test at dispensary	0.044*	0.116*	0.090	0.132
	(0.02)	(0.05)		
Pregnancy test – do not know	-0.000	-0.001	0.010	0.010
	(0.00)	(0.01)		
N	2,053	2,052	1,064	989

Notes: Linear models were estimated for the panel of youth interviewed both at baseline and in round four. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01.

These findings confirm those from rounds two and three, when we also found an increase in knowledge about where to obtain contraception as a result of the intervention. Nevertheless, there were fewer impacts detected at round four compared to round three (particularly in respect of knowledge of where to obtain condoms). This may be because, as the sample aged, more participants became aware of where they could obtain condoms, meaning the control group caught up with the treatment group. When we analysed impacts separately by gender (*see Table C.12.1, Appendix C*), we found that the increased knowledge resulting from the intervention was driven by females. At round 4, females in treatment villages were 7.1 percentage points more likely to know that they could seek contraceptives from a dispensary, compared to females in control villages. A similar impact is observed for females' knowledge about seeking pregnancy tests from a dispensary. There were no significant impacts among males.

Turning to health-service use in the pooled sample, we found no impacts on whether adolescents had visited a health facility for SRH reasons in their lifetime or during the previous 12 months (*see Table 12.2.*).[47] However, when we analysed impact by gender, we found sustained programme impacts on male use of health services. As a result of the cash-plus intervention, males were 6.9 percentage points and 5.5 percentage points more likely than control youth to have visited a health facility for SRH services in their lifetime and in the previous 12 months, respectively (*see Table C.12.2, Appendix C*). This is consistent with round three findings.

Table 12.2. Cash-plus impacts on SRH visits (single difference)

	ITT IMPACT	ATT IMPACT	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)
Visited health facility for SRH services – in lifetime	0.044	0.118	0.362	0.380
	(0.02)	(0.06)		
N	2,053	2,052	1,064	989
Visited health facility for SRH services – in previous 12 months	0.045	0.120	0.312	0.334
	(0.03)	(0.07)		
N	2,053	2,052	1,064	989
Latest SRH visit at dispensary – in previous 12 months	0.025	0.055	0.274	0.306
	(0.04)	(0.09)		
N	662	661	332	330
Latest SRH visit at clinic, healthcare centre, hospital or doctor – in previous 12 months	-0.025	-0.055	0.726	0.694
	(0.04)	(0.09)		
N	662	661	332	330
Latest SRH visit at government facility – in previous 12 months	0.029	0.061	0.913	0.939
	(0.02)	(0.04)		
N	662	661	332	330

Notes: Linear models were estimated for the panel of youth interviewed both at baseline and in round four. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01.

47 The attrition analysis showed that in cash-only (control) villages, youth who were interviewed in round four were significantly more likely to have ever visited health facilities for SRH in round three compared to youth who had attrited between round three and round four (see Table B.31, Appendix B). Hence, the round four visit rate in control villages is likely to be overestimated. This does not invalidate the estimated impact, however, which refers to changes between baseline and round four.

Next, we examined reasons for the most recent SRH visit among participants who reported seeking services. We found no intervention impacts on reasons for the SRH visit in the pooled sample (*see Table 12.3*) nor when we analysed by gender (*see Table C.12.3, Appendix C*). Among treatment and control group males, the most common reason for seeking services was to obtain condoms (70 per cent and 72 per cent among control and treatment groups, respectively; *see Table C.12.3, Appendix C*). Among females, seeking contraception (including condoms) was the most common reason for seeking services (56 per cent and 62 per cent among control and treatment groups, respectively). However, a significant proportion of females also sought services for pregnancy, maternity or gynaecological examinations (40 per cent and 35 per cent among control and treatment groups, respectively; *see Table C.12.3, Appendix C*). Additionally, treatment-group males were more likely to request contraception (including condoms) during health consultations compared to control-group males, while no impacts were observed for this outcome among females.

Table 12.3. Cash-plus impacts on reasons for seeking SRH services (single difference)

	ITT IMPACT	ATT IMPACT	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)
Latest SRH visit reason: contraception (including condoms)	0.057	0.114	0.587	0.655
	(0.04)	(0.08)		
Latest SRH visit reason: STI testing/treatment	-0.028	-0.059	0.066	0.048
	(0.02)	(0.04)		
Latest SRH visit reason: pregnancy, maternity, gynaecological examination	-0.025	-0.045	0.331	0.285
	(0.04)	(0.08)		
Requested contraceptives during health consultation	0.023	0.045	0.505	0.524
	(0.04)	(0.09)		
N	662	661	332	330

Notes: Linear models were estimated for the panel of youth interviewed both at baseline and in round four. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01.

We also asked whether youth requested contraceptives during their last health consultation. While a higher percentage of treatment-group youth (52.4 per cent) than control-group youth (50.5 per cent) responded 'yes' to this question, differences were not statistically significant and thus there were no programme impacts on this outcome.

Certain perceptions about contraceptives were also observed, indicating that knowledge of family planning and contraceptives had increased over the course of the intervention. In qualitative interviews, youth could name all major forms of contraceptives for both males and females and were aware of where they could access them. For example:

I: Why don't you use family planning?

R: Like getting an implant?

I: Any method.

R: They say if you use those things before having children…, you will never [have] children.

I: What family planning methods do you know? Can you name them?

R: Injections, pills, implants…, IUDs.

I: Now, at your dispensary in Masoko, which of these services that you have mentioned are available?

R: Injections and implants. That's all…; they are the ones I see.

(Interview with female, 19 years old, completed Standard VII, single, Village 2161, 4 February 2021)

Finally, we asked whether youth were enrolled in health insurance schemes. Universal health coverage is a target under SDG 3 (ensure healthy lives and promote well-being for all at all ages), and insurance coverage can help reduce cost barriers that prevent care-seeking and can also reduce catastrophic out-of-pocket spending related to health. In the United Republic of Tanzania, social health protection is provided mainly through the National Health Insurance Fund (NHIF), which is targeted at formal sector workers, and the Community Health Fund (CHF), which is targeted at informal sector workers and poor households. Both programmes require the payment of annual premiums. PSSN households are strongly encouraged by programme personnel to enrol in the CHF, but households must still pay the annual premium, which can be costly for poor PSSN households. Thus, there are still large gaps in coverage rates. The youth in our study reported CHF coverage rates of 7.3 per cent and 6.3 per cent among control and treatment groups, respectively. Even lower percentages of youth reported having NHIF or other private health insurance, which was to be expected, given that youth in this study came from PSSN households, which are generally poor and engaged in informal sector employment. We found that the cash-plus intervention had no impact on CHF enrolment or overall insurance coverage (*see Table 12.4*). We did, however, find a small, negative impact on NHIF enrolment (1.5 percentage points),

driven by the female sample (*see Table C.12.4, Appendix C*). It is unclear how the intervention could have negatively affected NHIF enrolment, but this result is likely a function of low enrolment rates and should be interpreted with caution. Moreover, we did not collect data on insurance coverage at baseline and therefore do not have information on baseline balance in these outcomes between treatment groups. Thus, impacts on this outcome should be interpreted with caution because we cannot conclude with certainty whether differences at round four were a result of programme impacts or of systematic differences between treatment and control groups at baseline.

Table 12.4. Cash-plus impacts on health insurance (single difference)

	ITT IMPACT	ATT IMPACT	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)
Registered or covered by health insurance	-0.027	-0.071	0.110	0.085
	(0.02)	(0.04)		
National Health Insurance Fund (NHIF)	-0.015*	-0.039*	0.030	0.015
	(0.01)	(0.02)		
Community Health Fund (CHF)	-0.012	-0.033	0.073	0.063
	(0.01)	(0.04)		
Other private health insurance	0.001	0.003	0.003	0.004
	(0.00)	(0.01)		
Other health insurance	-0.001	-0.002	0.005	0.004
	(0.00)	(0.01)		
N	2,053	2,052	1,064	989

Notes: Linear models were estimated for the panel of youth interviewed both at baseline and in round four. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01.

13. Violence

Key findings

- In round two, there were no impacts on experiences of violence (impacts on perpetration of violence were not measured in Round 2). By round three, however, the intervention had reduced females' experience of sexual violence in the previous 12 months by 5.3 percentage points (representing a 61.7 per cent reduction) and males' perpetration of physical violence by 6.3 percentage points (representing a 47.8 per cent reduction).
- By round four, the cash-plus intervention had reduced the risk of lifetime experience of sexual violence among females by 7.2 percentage points.
- There were no programme impacts on emotional violence, physical violence or intimate-partner violence experiences in round four.
- In round four, there were no programme impacts on any of the violence-related reporting (help-seeking) indicators among females, but the programme did increase the likelihood that male survivors sought help from formal sources.
- In round four, there were no programme impacts on perpetration of physical or emotional violence.

In this section we examine impacts on experiences of and perpetration of violence. While violence is experienced across the socioeconomic distribution, poverty can sometimes exacerbate risks of violence. Economic vulnerability may lead females, in particular, to engage in age-disparate relationships or transactional sex in order to meet their basic needs. These can, in turn, increase females' risk of HIV and violence. Worldwide, one in three adult women have experienced a form of intimate partner violence (IPV) (Devries, Mak, Garcia-Moreno, et al., 2013). IPV often begins early in a relationship (Peterman et al., 2015), and adolescence is a period when individuals are forming romantic relationships for the first time. It is important to note that both males and females can be victims of IPV; however, females are more likely to experience all forms of IPV (emotional, physical and sexual), and the violence they experience is more common, more severe and more likely to result in injuries than the IPV that males experience at the hands of females (Kishor and Bradley, 2012).

Experiences of violence can have adverse effects on an individual's physical and mental health, including, for example, depressive symptoms and suicide attempts (Devries, Mak, Bacchus, et al., 2013), unintended pregnancy and inconsistent contraceptive use (Gazmararian et al., 2000), chronic pain, disability, and drug and alcohol abuse (Heise et al., 2002), and injury and post-traumatic stress disorder (Campbell, 2002). There are also significant economic costs of violence, including costs

of seeking healthcare and lost productivity (Vyas et al., 2021). One study estimated that IPV costs the United Republic of Tanzania 1.2 per cent of the country's GDP every year (Vyas, 2013). In respect of children, more specifically, a Tanzanian study from 2009 indicated that 3 in 10 females and 1 in 7 males experienced sexual violence before the age of 18, and three quarters of both males and females experienced physical violence at the hands of an adult or intimate partner before the age of 18 (UNICEF Tanzania et al., 2011). The same study also revealed that 30 per cent of females and 20 per cent of males reported that their first sexual intercourse was forced.

We examined impacts of the cash-plus intervention on experiences of emotional, physical and sexual violence. Perpetrators of these various forms of violence include intimate partners (spouses, boyfriends/girlfriends), family members, authority figures, peers and strangers. In round two, we found no impacts on experiences of emotional, physical or sexual violence. However, by round three, the intervention had reduced females' experience of sexual violence in the previous 12 months by 5.3 percentage points (representing a 61.7 percent reduction) and males' perpetration of physical violence by 6.3 percentage points (representing a 47.8 percent reduction).

To measure experiences of violence, we used validated survey items from Violence Against Children Surveys (VACS) and DHS previously implemented in the United Republic of Tanzania.[48, 49, 50] We use a split sample approach for administering modules on violence victimization in order to protect participants' confidentiality. Thus, the sample size analysed in this section was half the overall sample. We added questions on violence perpetration in round three.[51]

In all previous survey rounds, we examined impacts on emotional, physical and sexual violence, as well as analysing a composite indicator of all forms of violence combined. In round four, we also specifically examined impacts on IPV, given that more of the sample had entered into romantic relationships by this time and may have been at risk of this outcome. For emotional and physical violence outcomes, we obtained data from all rounds and thus could analyse impacts using ANCOVA models. However, due to a

48 Experience of emotional violence in the previous 12 months was assessed based on whether someone had insulted or made the participant feel bad about her or himself, or belittled her or him, called her or him names or humiliated her or him in front of other people.

49 Experience of physical violence in the previous 12 months was assessed through questions about whether anyone had done any of the following to the participant: (a) slapped or pushed her or him; (b) hit her or him with a fist; (c) kicked or beaten her or him; (d) tried to choke her or him or burn her or him on purpose; and (e) threatened or attacked her or him with a knife, gun or any other weapon.

50 Experience of sexual violence in the previous 12 months was assessed by asking youth whether anyone had: (a) touched her or him in a sexual way without their permission; (b) physically forced her or him to have sexual intercourse; and (c) forced her or him to perform other sexual acts that they did not wish to perform. We assessed lifetime sexual violence with the following items: (a) ever physically forced to have sexual intercourse; (b) ever forced to perform other sexual acts that she or he did not wish to perform; and (c) sexual debut was forced, pressured or the result of being tricked.

51 We assessed whether adolescents had perpetrated emotional violence through the following items: whether they had (a) insulted someone or made someone feel bad about themselves or (b) belittled someone, called someone names or humiliated someone in front of others. Next, we assessed perpetration of physical violence with the following items: (a) slapped or pushed someone; (b) hit someone with a fist, kicked someone or beat someone; (c) tried to choke someone or burn someone on purpose; and (d) threatened to use or used a gun, knife or other weapon against someone.

skip pattern error in data collection at baseline, we did not have data on sexual violence outcomes for all youth at baseline and thus could not analyse sexual violence impacts using ANCOVA models. In addition, because perpetration information was added after baseline, we also could not use ANCOVA models for this outcome. Thus, for sexual violence (and composite indicators including sexual violence) and perpetration, we estimated impacts using single difference models.

Reports of physical and emotional violence declined over time (34.9 per cent at baseline compared to 26.8 per cent of control-group and 26.4 per cent of treatment-group youth in round four) (*see Table 13.1*). As expected (because more youth entered romantic and sexual partnerships over time), reports of IPV increased slightly (from 12.7 per cent at baseline to 14.4 per cent among control and 16.5 per cent among treatment youth in round four). Nevertheless, we found no programme impacts on physical violence, emotional violence or IPV.[52] When examining rates by gender (*see Table C.13.1, Appendix C*), we observed that females reported higher prevalence of emotional abuse (30.7 per cent among the control group and 30 per cent among the treatment group) compared to males (23.1 per cent among the control group and 23 per cent among the treatment group). Both rates were lower than at baseline (38.4 per cent among females and 31.7 per cent among males). Rates of physical violence also decreased among both genders and did not differ greatly between males and females. While at baseline 23.9 per cent of females reported experiencing physical violence, in round four, this decreased to 10.6 percent and 14.8 per cent of control and treatment females, respectively. Among males, the baseline rate was 27.9 per cent, while, in round four, rates of physical violence were 13.1 per and 10.5 per cent among control and treatment groups, respectively. When examining IPV (a subset of reports of physical and emotional violence), we observed that 9.6 per cent of females reported experiencing emotional or physical IPV at baseline, and this increased to 13 per cent and 15.2 per cent of control and treatment group females, respectively, by round four. Among males, 15.6 per cent experienced IPV at baseline, and this increased to 15.8 per cent and 17.6 per cent of control and treatment group males, respectively. We also found no impacts on physical violence, emotional violence or IPV when analysing males and females separately (*see Table C.13.1, Appendix C*).

52 The attrition analysis showed that, in cash-plus villages, youth who were interviewed in round four were significantly more likely to have experienced emotional or physical IPV in round three compared to youth who had attrited between round three and round four (see Table B.31, Appendix B). Hence, the round four rate of emotional or physical IPV in cash-plus villages is likely to be overestimated. However, this does not invalidate the estimated impact, which refers to changes between baseline and round four. Results did not change significantly when using DD.

Table 13.1. Impacts on experiences of violence in the previous 12 months (ANCOVA)

	ITT IMPACT	ATT IMPACT	BASELINE MEAN	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)
Experienced emotional abuse	0.007	0.018	0.349	0.268	0.264
	(0.03)	(0.08)			
Experienced physical violence	0.007	0.018	0.259	0.119	0.126
	(0.02)	(0.06)			
Experienced emotional or physical violence	0.002	0.005	0.434	0.294	0.286
	(0.03)	(0.08)			
Experienced emotional IPV	0.032	0.078	0.096	0.125	0.156
	(0.03)	(0.07)			
Experienced physical IPV	0.009	0.021	0.072	0.076	0.084
	(0.02)	(0.05)			
Experienced emotional or physical IPV	0.020	0.050	0.127	0.144	0.165
	(0.03)	(0.07)			
N	976	976	976	514	462

Notes: Linear models were estimated for the panel of youth interviewed both at baseline and in round four. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01.

We found that 4.5 per cent and 2.8 per cent of control and treatment groups, respectively, reported experiencing sexual violence in the 12 months prior to interview (*see Table 13.2*). This increased to 8.6 per cent and 5.6 per cent among control and treatment groups, respectively, when considering lifetime experiences of sexual violence. Moreover, 5.1 per cent and 3.7 per cent of the control and treatment groups, respectively, reported that their first experience of sexual intercourse was forced. We created a composite indicator for experiences of emotional, physical or sexual violence and found that 30.4 per cent of the control group and 28.8 per cent of the treatment group reported experiencing any form of violence in the previous 12 months. We found no impacts on sexual violence, the first sexual intercourse being forced or the composite violence indicator in the pooled sample. When examining rates by gender, however, we observed that females were more likely to experience the following forms of violence compared to males: sexual violence in the previous 12 months (8.3 per cent and 4.9 per cent among control and treatment group females, respectively, vs. 0.8 per cent among males), the first sexual intercourse being forced (10.2 per cent and 7.6 per cent among control and treatment group females, respectively, vs. zero per cent among males) and violence represented by the composite violence indicator (33.9 per cent and 32.3 per cent among control and treatment group females, respectively, vs. 26.9 per cent and 25.5 per cent among control and treatment group

males, respectively) (*see Table C.13.2, Appendix C*). Among females, the cash-plus intervention reduced the probability of experiencing sexual violence during their lifetime by 7.2 percentage points (*see Table C.13.2, Appendix C*). There were no impacts on any other outcomes nor on any outcomes among males. These findings are consistent with but slightly different from those in round three, when we found protective impacts on reports of sexual violence in the previous 12 months among females.

Table 13.2. Impacts on experiences of violence in previous 12 months and over a lifetime (single difference)

	ITT IMPACT	ATT IMPACT	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)
Experienced sexual violence – in previous 12 months	-0.016	-0.040	0.045	0.028
	(0.02)	(0.04)		
N	977	977	514	463
Experienced sexual violence – in lifetime	-0.028	-0.069	0.086	0.056
	(0.02)	(0.04)		
N	977	977	514	463
Experienced emotional/physical/sexual violence – in previous 12 months	-0.016	-0.040	0.304	0.288
	(0.03)	(0.08)		
N	976	976	514	462
First sexual intercourse was forced	-0.013	-0.032	0.051	0.037
	(0.01)	(0.03)		
N	977	977	514	463

Notes: Linear models were estimated for the panel of youth interviewed both at baseline and in round four. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01.

Through the qualitative responses, we observed that, in many cases, youth could recall experiences of violence perpetrated against another person but did not often report their own experiences of violence. Incidences of females being raped in village premises were mentioned, indicating an awareness of sexual violence. The 'fear of rape' was thus evident when youth were speaking about females pursuing certain livelihood activities that were seen as risky or could potentially expose them to violence.

IPV, including personal experiences, was also discussed in qualitative interviews. In one interview, a divorced female reported how her relationship lasted for only seven months after she experienced violence:

R: I stayed at his place for seven months.

I: So, right now, it means this relationship is still continuing?

R: No. If he calls me he shouts; he says I have told you to come but you don't want…

I: What happened [that] caused the relationship to end?

R: I got sick… When I got sick he did not want to take me to the hospital. He also said, "You should be thankful we are at mother's; if we were at our house you would die." After that he did very weird actions. He started raising [a] machete in front of his mother, saying, "I will kill you; I will cut your head and cook soup; I will cut your whole body and call dogs to eat." His brother stopped him [and said], "My young brother, what you are saying is not good; if she goes to her home, she will narrate and she will never come back to you again." He replied, "I have said I will kill her." I thank my mother because she saved me till today you have found me. And I swear [I'm not] going back to him. I will never go back.

(Interview with female, 21 years old, completed Standard VII, divorced, Village 2152, 12 February 2021)

We present findings on help-seeking among respondents who reported experiencing emotional, physical or sexual violence in the previous 12 months (n = 290) (*see Table 13.3*). Respondents who reported experiencing violence were asked whether they had ever tried to seek help or tell anyone about the violence. Help-seeking behaviour was then classified into two types: formal and informal.[53] Impacts on seeking help were estimated among those reporting any emotional, physical or sexual violence because the sample sizes were too small to estimate impacts on different categories of violence separately. Among those experiencing violence, 35.3 per cent of control group and 32.1 per cent of treatment group youth reported the violence to someone else. However, only 6.4 per cent and 9.7 per cent of control and treatment group youth, respectively, reported it to formal sources. There were no programme impacts on any of the reporting indicators. Females were more likely to report seeking help than males. Among females who experienced violence (n = 158), 52.5 per cent and 44.4 percent of control and treatment group youth, respectively, reported it to someone else (11–11.6 per cent to formal sources). While there were no programme impacts among females, the cash-plus intervention led to an increased probability (8.3 percentage points) of males seeking formal help, although not overall or to informal sources (*see Table C.13.3, Appendix C*).

53 Formal included seeking the help of police, doctors or health workers, priests or other religious leaders, counsellors, NGOs or women's organizations, or local leaders. Informal included seeking the help of friends, family, the family of the spouse or partner, or neighbours.

Table 13.3. Impacts on seeking help for violence (single difference)

	ITT IMPACT	ATT IMPACT	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)
Sought help for emotional/physical/sexual violence	-0.037	-0.097	0.353	0.321
	(0.06)	(0.15)		
Sought help from formal source for emotional/physical/sexual violence	0.028	0.074	0.064	0.097
	(0.03)	(0.08)		
Sought help from informal source for emotional/physical/sexual violence	-0.042	-0.111	0.327	0.291
	(0.06)	(0.15)		
N	290	290	156	134

Notes: Linear models were estimated for the panel of youth interviewed both at baseline and in round four. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01.

Among the panel samples, we did not find any balance issues in the pooled or female samples. However, emotional violence and physical violence outcomes were not balanced at baseline among the panel of males (*see supplementary online appendix C*). There were no issues of selective attrition among any of the samples.

Turning to perpetration, we observed that 7.8 per cent and 7.3 per cent of control and treatment group youth, respectively, reported perpetrating emotional abuse in the previous 12 months (*see Table 13.4*). The percentages were slightly lower (5.1 per cent among control and 3.9 per cent among treatment group youth) in respect of the perpetration of physical violence. There were no programme impacts on perpetration for the pooled sample or for either gender (*see Table C.13.4, Appendix C*). This was in contrast to round three, when we found that the programme reduced the perpetration of physical violence (driven by the male sample).

Table 13.4. Impacts on experiences of perpetration in the previous 12 months (single difference)

	ITT IMPACT	ATT IMPACT	ROUND FOUR CASH ONLY MEAN	ROUND FOUR CASH PLUS MEAN
	(1)	(2)	(3)	(4)
Perpetrated emotional abuse	-0.003	-0.008	0.078	0.073
	(0.02)	(0.05)		
Perpetrated physical violence	-0.012	-0.030	0.051	0.039
	(0.02)	(0.04)		
N	977	977	514	463

Notes: Linear models were estimated for the panel of youth interviewed both at baseline and in round four. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p < 0.05, **p < 0.01.

14. Gender-sensitive social protection and gender-equality outcomes

Key findings

Long-term impacts on gender-equality outcomes:

- There were sustained, positive impacts in health and economic domains that can facilitate transformative effects, such as females running a business, male use of health services, female knowledge of where to obtain contraception and pregnancy tests, and a reduction in female reports of sexual violence over a lifetime.
- Within households, time-use patterns continued to be gendered, with increases in livestock keeping and farm work following the programme observed only among females.
- New impacts in round four included an increase in care work (of sick and elderly people) by females and increased likelihood of males reporting that their partner had been pregnant.

Gendered impacts of payment delays on PSSN households:

- As part of the current study, we followed up PSSN households to understand how they had coped with continued PSSN payment delays over an 18-month period between 2019 and 2020.
- In response to PSSN payment delays, households reduced the number and size of their daily meals, had more debt, sold assets such as livestock, increased the amount of casual labour in which they were engaged (both adults and children), reduced health-services use or purchase of medicines and reduced investments in small businesses; school attendance was affected.
- The PSSN payment delay coping strategies did not appear to be gendered; nor did the payment delays exacerbate existing gender inequalities.

Implementation and its influence on gender-equality outcomes:

- Important factors in the achievement of the various gender-equality outcomes included the information sessions, the gender-sensitive recruitment of mentors/peer educators and the mixed-sex training.
- Some components, such as the productive grant, economically empowered females and improved their social standing and confidence in avoiding risky sexual behaviours.
- Gaps in the referral system in the study communities were identified as a factor in preventing survivors reporting experiences of violence or seeking formal help.

Moderating influences of contextual factors:

- There was a limited role of service access or gender norms in moderating programme impacts, with some exceptions.
- Conservative norms led to adverse programme impacts on contraceptive use, while progressive norms concerning female decision-making enabled the intervention to be more effective at delaying sexual debut.
- The intervention let to increased health-seeking behaviour among adolescents in communities with limited access to quality health services, illustrating how information and linkages can improve some outcomes and address gaps in provision in underserved communities.

14.1 Gender-sensitive social protection

Social protection is a widely recognized strategy for improving the well-being of children and households and cushioning them from shocks and risks. However, a common critique of existing social protection programmes worldwide is that they are insufficiently gender sensitive or deal only superficially with gender, despite increasing awareness of the important role played by gender inequality in creating and perpetuating poverty and vulnerability (Holmes and Jones, 2013). In addition to the role of gender inequality in driving poverty, there are gendered responses in adverse coping strategies to poverty, which reinforce this vicious cycle. These include males' increased risk of engagement in child labour, pressure on females to engage in transactional sex or drop out of school to engage in caregiving and domestic activities, and females' higher risk of food insecurity, compared to men, in a household faced with limited resources.

This recognition of gendered vulnerabilities related to poverty has led many governments and partners to consider gender in the design of their social protection programmes. Programmes that have primary or secondary objectives related to female empowerment or addressing aspects of gender inequality generate positive impacts across many spheres (e.g., economic or violence related). Nevertheless, many of these programmes fall short of their aims or have unintended effects, such as the creation of excessive burden on females, which reinforces stereotypical caregiving roles instead of empowering females to look beyond existing, constraining roles (Cookson, 2018; Molyneux, 2006). More attention is being paid to gender in the design, implementation and monitoring of social protection programmes in an effort to be more gender responsive, but large gaps still remain.

14.2 PSSN and gender

The Government of the United Republic of Tanzania has taken steps to address these gaps in relation to the PSSN. To address gender gaps in the design, implementation and monitoring of the PSSN, TASAF, together with development partners, conducted a gender assessment of the PSSN in 2017 (TASAF and UNDP, 2018). Highlighting how gender equality and female empowerment are drivers for inclusive and sustainable development and that poverty in the United Republic of Tanzania is feminized, the report analysed the PSSN through a gender lens. It revealed that, although the PSSN was not tailored to explicitly promote gender equality and female empowerment, the programme did address gender issues. Examples included ensuring that women received the transfer on behalf of the household, offering flexible working hours to females, differentiating tasks for public works programmes and collecting sex-disaggregated data for monitoring purposes. The report also highlighted that public-works gender-sensitive guidelines were being implemented to varying degrees across districts and that more awareness was needed at the local level. In terms of the livelihood enhancement component of the PSSN, the report showed that guidance was not provided on how gender considerations should be addressed. Moreover, TASAF staff was not adequately trained on gender issues. Key recommendations arising from the report included: integrating gender into all components and manuals of the PSSN; developing simple gender-mainstreaming guidelines for all components of the programme and making them accessible to TASAF staff and PSSN implementers; sensitizing staff and PPSN implementers to gender analysis and the application of gender-mainstreaming tools and building their capacity in these areas at all levels; conducting community sensitization sessions; and establishing links with other national, regional and district level programmes concerning female empowerment and gender equality.

In addition to this gender analysis of the PSSN, three impact evaluations of PSSN phase one have been conducted and have measured outcomes related to gender equality. The main impact evaluation conducted by the National Bureau of Statistics and the World Bank found that the PSSN increased female decision-making power, particularly among those with a partner and in areas of decision-making related to the use of their own earnings, and female primary decision-making power regarding children's health and well-being, and household purchases (Rosas et al., 2019). The PSSN did not, however, increase females' primary decision-making power in matters concerning their own health and contraception. A further impact evaluation aimed specifically to examine PSSN impacts on female empowerment in agriculture (Organization for Social Science Research in Eastern and Southern Africa and Repoa, 2020). This evaluation used descriptive analysis over two waves of data collection (2015–2017) but did not use impact-evaluation methods to estimate programme impacts. The authors concluded that welfare improved as a result of the PSSN and females had better information/awareness about productive and resource management activities. They also found, however, that females in both polygamous and monogamous households still did not have full control over the income they generated or the income they received from TASAF. The study also

revealed that female participation in leadership roles and political activities was very low. Additionally, the females in the study were found to have low levels of education and some were illiterate.

Finally, an impact evaluation examining PSSN impacts on adolescent and youth well-being conducted jointly by REPOA with UNICEF Office of Research – Innocenti found that females (aged 15–28 years at baseline) reported increased autonomy and ability to make household decisions as a result of the PSSN, but no impacts were found among males (Tanzania PSSN Youth Study Evaluation Team, 2018). Moreover, the study found that while the PSSN increased school attendance and children's participation in economic activities (largely livestock herding for the household), there were no changes in children's engagement in household chores. More specifically, the positive impacts on school attendance were driven by males, who had slightly lower levels of attendance, compared to females, at baseline. Additionally, the PSSN had a positive impact on females' ability to read and write, but not that of males.

14.3 The PSSN's cash-plus model for safe transition to a healthy and productive adulthood

While the aforementioned 2018 impact evaluation by REPOA and UNICEF Office of Research – Innocenti found positive impacts on adolescent and youth well-being, it also identified several vulnerabilities that adolescents continue to experience, despite household receipt of the PSSN. The programme design components largely addressed the human-capital development of young children and vulnerabilities related to poverty in adulthood. The study revealed, however, that almost half of children aged 14–17 years were out of school at baseline, prior to receipt of the PSSN, and were unlikely to re-enter school after they had dropped out. Additionally, the study highlighted that the PSSN had no impacts on other outcomes related to safe and healthy transition from adolescence to adulthood, including delayed sexual debut and pregnancy, contraceptive use, risky sexual behaviours and mental health. Thus, the study identified the need for additional programmes and linkages to other services among this population.

Moreover, many adverse outcomes caused by gendered vulnerabilities resulting from poverty are often related to women's and girls' SRH vulnerability combined with structural barriers to their access to proper healthcare resulting from social norms (Gavrilovic and Palermo, 2020). These may be particularly evident in adolescence, which is a period of intense transformation associated with multiple opportunities and risks as children transition into adulthood. Decisions about sexual debut, schooling and partnerships are made at this age, and risks associated with these decisions include violence, exploitation, early pregnancy and HIV infection. In the United Republic of Tanzania, 43 per cent of females aged 20–24 years have given birth before the age of 18 and between 31 per cent and 37 per cent of females marry before the age 18

(Population Council et al., 2015). Moreover, 30 per cent of females and 20 per cent of males experience forced first sexual intercourse, and half of married females aged 15–24 years have a partner 10 or more years older than themselves, increasing the risk of IPV and HIV (UNICEF Tanzania et al., 2011). Additionally, less than half of adolescents and young people aged 15–24 years have sufficient knowledge on how to protect themselves against HIV (TACAIDS, 2013). Finally, 3 in 10 females experience sexual violence before the age 18 and three quarters of males and females experience physical violence at the hands of an adult or intimate partner before the age of 18 (Population Council et al., 2015).

Given that monetary poverty is not the only driver of all the risks faced by adolescents, there is a potential for integrated or cash-plus programmes to further mitigate these age-sensitive risks. An additional motivation for linking prevention programmes and access to services to cash transfers is that social protection programmes often identify and target the poorest members of society, thus linking these vulnerable populations to other services may have synergistic impacts on their well-being (Roelen et al., 2017).

Taking account of this evidence and following an expert consultation in February 2016, TASAF, with technical support from UNICEF and TACAIDS, developed the Ujana Salama model as an adolescent-targeted programme to be implemented within the PSSN structures. The programme aimed to address some of the vulnerabilities faced by adolescents and help facilitate their safe, healthy and productive transitions into adulthood. It was developed and piloted under the livelihood enhancement umbrella and was expected to contribute to future livelihood enhancement programming under the PSSN. In designing this cash-plus pilot, TASAF was eager to trial livelihood component options and produce recommendations for future upscaling. This provided an opportunity for the cash-plus pilot to be designed with scalability in mind and piloted through TASAF implementation structures.

The previous evaluation rounds of the Ujana Salama pilot have examined impacts disaggregated by sex and have included outcomes related to gender equality and gendered vulnerabilities, including violence and exploitation, gender attitudes, marriage and pregnancy, and access to SRH services (Tanzania Adolescent Cash Plus Evaluation Team, 2018, 202a, 2020b). Despite this attention to gender and evidence provided by the aforementioned assessment and impact evaluations, questions remain about the impacts of the PSSN, its implementation and related programmes on gender-equality outcomes. For example, from 2019 to 2020, TASAF experienced funding shortfalls and PSSN payments were stopped after the March 2019 payment cycle and were not fully resumed until September 2020. Since the upscaling of the PSSN in 2015, payments had been made on time every two months, so this was the first delay in payments. The next cycle of PSSN payments should have been made in May/June 2019, but no further payments were made until December 2019/January 2020 and then September 2020. It is possible that coping strategies employed to deal with these payment delays may have been gendered, possibly disadvantaging females to a greater extent than males, or vice versa. In addition, these delays may have eroded

previous gains in female empowerment or mitigated potential impacts of the cash-plus programme. Moreover, these implementation challenges also coincided with the COVID-19 pandemic, which likely had adverse impacts on households, including adolescents. In the current section, we also summarize the findings from a separate report that examined the impacts of the payment delays, including whether coping strategies were gendered and/or exacerbated inequalities between males and females (Zuilkowski et al., 2022).

14.4 Research questions and conceptual framework on gender equality outcomes

Evidence summarized in the current section takes a close look at gender and aims to answer the following research questions:

1. How are the *longer-term (post-intervention) impacts* of a plus component, implemented as part of a 'cash-plus' programme, targeted at adolescents gendered?

2. How are *coping strategies* in response to irregularities in cash-transfer payments over the previous 12 months gendered?

3. How has the *implementation of the plus component* influenced gender-equality outcomes?

4. How do *contextual factors* (such as community social and gender norms, market availability, quality and distance to facilities) moderate programme impacts?

These research questions are aligned with the overarching research objectives of GRASSP[54] in order to evaluate the effects of design and implementation on gender equality outcomes[55] and to examine the moderating role of gender-specific contextual factors and social and gender norms.[56]

This study, especially this section, is also aligned with seven elements of the GRASSP conceptual framework (*see supplementary online appendix D*) (UNICEF Innocenti, 2020). The cash-plus programme aimed to address gender attitudes (via training and

54 Objective two of GRASSP: explore and evaluate the pathways through which design and implementation features of social protection systems – and complementary interventions – improve outcomes for women and girls and bring about most change in gender equality, and how this varies by context.

55 Research stream two, objective one: unpack the independent and complementary effects of aspects of design and implementation, at different points across the gender-integration continuum (i.e., from gender neutral to gender transformative) and across the life-course, on gender equality and primary outcomes of social protection systems (related outputs: mixed-method report and case studies).

56 Research stream two, objective two: investigate the moderating effects of key gender-specific contextual factors and social and gender norms on appropriate gender-responsive and age-sensitive/life-course social protection systems (related outputs: moderators and mediators report).

mentoring) and reduce youth vulnerabilities and poverty (through information on health and livelihoods, and productive grants). The assessment of its impact is therefore in line with the framework's emphasis on addressing *gender inequality, poverty and vulnerabilities and gender inequality pathways* (element one of the framework). The first and third research questions address aspects of *gender-responsive implementation in social protection systems* (element two); these include the regularity of cash payments and how the training and mentoring was provided. While some aspects of programme delivery were gender neutral, in that male and female youths were taught the same training modules and were given the same productive grants and mentoring, other aspects of implementation were gender responsive. For example, modules included the in-depth analysis of gender roles, aimed at combatting gender stereotypes and reducing gender-specific vulnerabilities. Furthermore, some training activities were conducted in separate sex groups. Moreover, the overall programme design of simultaneous economic- and health-asset strengthening was, in large part, driven by the recognition of gendered vulnerabilities that can be driven by multidimensional poverty, including transactional sex, early pregnancy, early marriage and disproportionate HIV risk among adolescent females. Taken together, these gender-responsive design and implementation characteristics, combined with efforts to prevent early pregnancy and improve future opportunities through increased SRH service access, particularly among females, meant that the intervention had the potential to be gender transformative. Consequently, the *degree of gender integration* in the cash-plus programme has been classified as *gender responsive* (element three). Furthermore, the cash-plus programme was age sensitive in its design and implementation, with plus components targeting younger and older adolescents, and the programme aiming to facilitate the safe transition to adulthood, which is a further *life-course* stage (element four). That is, the programme was designed to identify particular vulnerabilities in adolescence that may hinder the realization of one's full potential in respect of health, economic productivity and overall well-being in adulthood, and it aimed to strengthen assets to combat these risks and vulnerabilities.

The programme's cash and plus components had the potential to ensure adequate responses to gender-specific needs and to enhance female empowerment (element five). The second research question examines the gendered and age-sensitive impacts of the programme, particularly the various *gender-equality outcomes* such as economic security (e.g., labour-force participation, business start-ups), improved health (e.g., fertility, family formation, use of youth-friendly SRH services, sexual behaviours), and enhanced education, bodily integrity (freedom from physical non-consented acts), mobility and GBV (element six). Various *causal mechanisms/change pathways* could be at play. In line with the GRASSP conceptual framework, the plus component may:

- *encourage investments in households' human development of adolescents* leading to improvements in education, health, livelihoods and economic security, and reductions in vulnerability to GBV. This can be achieved via the programme's mentoring, sexual and reproductive health rights (SRHR) and livelihoods training and through increased income and future income-generating potential (*reduced poverty*

and increased income security) from the productive grant, as well as increased access to resources for investments in schooling from the productive grant.

- *address autonomy, confidence and self-efficacy through reducing mental stress* among adolescents, leading to better mental health, increased economic participation, and reduction in risky sexual behaviours and vulnerability to GBV. This can be achieved via the programme's mentoring, SRHR training and productive grant components. Moreover, the training and overall programme participation can increase social capital among participants, which increases their available resources in times of need and reduces negative coping strategies, further reducing mental stress.

- *enable service providers to be more gender responsive by strengthening their capacity to address gender biases and ensure gender equality in programme implementation* via the programme's facility-level training on adolescent-friendly health services and referrals to health services. Better knowledge of gender-specific health issues, as well as facilitation of linkages to adolescent-friendly health services and supply-side strengthening, may contribute to better health outcomes for both females and males.

- *change social and gender norms including around gender roles, such as unpaid care and domestic work, and increase female labour-force participation rates* long term through increases in economic opportunities for females and in gender-equitable attitudes, which can have lasting impacts on future relationships, by making them more gender equitable and reducing the risk of future IPV. This can be achieved via the programme's mentoring and training on SRHR, gender-equitable attitudes and violence risks.

Finally, the fourth research question seeks to assess the role of *moderating factors*, such as social and gender norms (concerning gender roles in work, marriage, sexuality and reproductive health, and violence, and female roles in decision-making), and quality of and distance to health facilities, in moderating programme impacts (element seven).

14.5 Post-intervention gendered impacts of the intervention

This subsection summarizes gendered differential impacts post intervention (i.e., 18 months after the end of the programme), based on the regression estimates presented in the previous sections. We only discuss outcomes when we find differential impacts, that is, impacts on males only or on females only, or where impacts on the full sample are driven by males or by females.[57]

57 Thus, mental-health findings are not discussed in this section as the effects of the intervention were consistent across males and females.

The most salient gendered differences were observed in the area of livelihoods. The positive impacts on business engagement reported in Section 7 ('currently running a business') were driven by the female sample, whereby the plus component increased the likelihood that young women would be running a business after the end of the programme by 9.5 percentage points (while the impact was not significant among males). Increases in business engagement were also observed in round three (endpoint, 2019) and, therefore, been sustained post intervention. Female adolescents and young women were also more likely to earn higher profits. Qualitative data points towards the higher tendency among females to settle in one location – compared to males who tend to be more mobile – as one of the factors contributing to more positive outcomes among females. Another potential reason highlighted in qualitative interviews was that males had a higher tendency to halt their business enterprises when they were not working out, compared to females who demonstrated more staying power.

The most predominant business activities among males were breeding livestock (29 per cent), petty trading (21 per cent), taxi-driving/transportation (14 per cent) and selling grains (13 per cent). Females were mostly engaged in petty trading (27 per cent), breeding livestock (20 per cent), selling fruit and vegetables (14 per cent) and selling grains (14 per cent).

Relatedly, the intervention increased youth engagement in farm work for the household and livestock herding for the household among females, but not among males (*see Section 7*). This was probably a consequence of the increased business engagement as, in many cases, the business started by adolescents consisted of buying livestock with the intention to sell it and make a profit. Males and female engagement in household work demonstrated an opposing trend, with females increasing and males decreasing their participation over time. Gendered differences were observed in engagement in some household chores. As a result of the cash-plus intervention, females in treatment villages were more likely to take care of elderly or ill people and to collect firewood, with no changes observed among males. One possible explanation is that males often have more opportunities to engage in income-generating activities outside the home, as confirmed by qualitative interviews. Another explanation is that knowledge about illnesses and income was increased as a result of the intervention and, given the gender patterns in how participants spent their time and unpaid caregiving responsibilities, females performed these tasks.

In addition, increased engagement in economic activities led to an increase in exposure to any work-related hazard, which was driven by the female sample, while the impacts on specific hazards were driven by the male sample.[58] This was a result of gender-discriminating norms around what types of activity are appropriate for males and females, and the nature of the tasks performed outside and inside the home, with tasks performed by males, such as hawking large livestock, working on bodies of water (sea, lakes, rivers) and operating a *bodaboda* (motorbike for public transportation), considered riskier.

58 Here, 'work' refers to economic activities for the household or outside the household.

In round three, we found a 7.1 percentage-point increase in the probability of school dropout among older females, probably driven by the anticipation of business grants and the lack of job opportunities for educated youth. These adverse impacts on attendance were no longer observed post intervention (round four), while educational attainment was not affected in either round (*see Section 7*).

Participants' aspirations to obtain vocational education increased post intervention. The 5.6 percentage-point increase in the probability of expecting to attend vocational training in the future (one year from the time of interview) within the full sample was driven by females (7.5 percentage-point increase). There was no impact among males.

The cash-plus intervention also reduced the risk of lifetime experience of sexual violence among females by 7.2 percentage points (*see Section 13*). In round three, similar protective impacts on experiences of sexual violence were also observed, including a reduction in male perpetration of physical violence. Increased gender-equitable attitudes among males, both at midpoint (round two) and round three, may be one explanation for this outcome. Qualitative data showed, however, that female youth were more likely to report another person's experience of sexual violence rather their own. This finding suggests that disclosure rates of sexual violence in the quantitative survey may be underestimated, but this is expected with any study on sexual violence and rates were not expected to vary between treatment arms. Thus, despite underreporting, the study's ability to detect programme impacts (i.e., internal validity) remains intact.

Regarding sexual behaviour, findings from round three showed a slight decrease in the age of sexual debut among girls in intervention villages; however, this finding should be interpreted with caution as a result of measurement error (e.g., some adolescents reported different ages of sexual debut in different rounds) and the small number of female adolescents debuting between rounds. This adverse finding was not observed in round four (*see Section 11*). The intervention also increased the likelihood of males reporting that their partner was or had been pregnant. This could be linked to the increased marriage rates and better economic situation of the treatment group compared to the control group.

Turning to health-service use, particularly SRH services (*see Section 12*), there were sustained programme impacts on the use of health services by males, but not females. This is consistent with findings from round three. Moreover, in round three, the increase in HIV testing in cash-plus villages was driven by males. We also found that impacts on knowledge of where to obtain contraception and pregnancy tests among females were sustained in round four, but not among males. There were gendered patterns in the reasons for seeking SRH services: to obtain condoms (both genders), to seek contraception (females) and to seek services for pregnancy, maternity or gynaecological exams (females).

In summary, 18 months after the end of the programme, we found sustained positive impacts on the running of businesses and vocational aspirations (driven by females), male use of health services, female knowledge of where to obtain contraception and pregnancy tests, and lifetime reports of sexual violence among females. Within households, time-use patterns continued to be gendered, with sustained impacts on livestock keeping and farm work among females. New impacts in round four included an increase in care work (for ill and elderly people) by females, an increase in exposure to work-related hazards and an increased likelihood of males reporting that their partner was or had been pregnant.

The intervention was delivered jointly to males and females, so differential impacts are unlikely to be driven by the intervention itself, but rather by baseline levels of knowledge and behaviour, as well as contextual factors such as gender norms. Contextual factors are analysed in Section 14.8. The mentors delivering the intervention were selected from the study communities and thus had been socialized in this context. Therefore, their interpretation and delivery of the materials may have been influenced by their own gender socialization. Implementation factors that may have influenced gender-equality outcomes, including the role of mentors, are analysed in Section 14.7.

14.6 Coping strategies in response to payment delays

In the transition between PSSN I and II, in 2018 and 2019, prolonged final negotiations between the Government and the World Bank, which loaned the majority of funds used to implement the programme, led to gaps in funding availability. Subsequently, between March 2019 and September 2020, this led to the first widespread delay in payments under the PSSN. Until 2019, PSSN payments were highly efficient and on time (every two months), and the correct amounts were paid to the correct beneficiaries.

A 2020 report found that, at the time of interviews in mid-2019, households had not received a PSSN payment in approximately four months, translating to approximately two missed payments (Zuilkowski et al., 2020). Both past and anticipated payment delays resulted in families not making the kinds of investment that would benefit their households in the future, such as the purchase of fertilizer for fields, adding capital to businesses or adding livestock. In the short term, these families had to conserve their minimal cash resources to pay for basic supplies, medical care and educational costs. Small businesses supported by PSSN payments were also adversely affected by delays as households were no longer able to invest in key inputs.

Since that time, the COVID-19 pandemic has increased poverty and food insecurity in the United Republic of Tanzania through restricted movement, loss of income and assets, and rising food prices. The loss of income had global influences, as tourism to the country declined dramatically, demand for and the price of its agricultural

commodities and manufactured goods dropped, and prices for mineral exports plummeted (including for gold, diamonds and tanzanite) (World Bank, 2021). The GDP growth rate slowed to an estimated 2 per cent in 2020 (World Bank, 2021). The average firm's sales revenues were 25 per cent lower during the pandemic compared to the pre-pandemic level (World Bank, 2021). Among PSSN households and their communities, these insecure economic conditions were exacerbated by PSSN payment delays between March 2019 and September 2020.

As part of the current study, we followed up PSSN households to understand how they continued to cope with continued delays over an 18-month period between 2019 and 2020. We further examined how these delays affected intra-household family dynamics and outcomes, including whether coping strategies were gendered. Methods and findings are summarized below while details can be found in the full report (Zuilkowski et al., 2022). Quantitative data were derived from a survey module on payments to households, as part of the larger cash-plus pilot-intervention evaluation. In terms of qualitative data collection, interviews were held with a subsample of 30 household respondents who were purposively selected to represent the geographical and demographical diversity of households participating in the study. They included respondents from all four study districts and both treatment and control households. Respondents for these in-depth, qualitative interviews were either PSSN beneficiaries or heads of households.

We found these continued payment delays exacerbated the economic insecurity that households experienced as a result of the COVID-19 pandemic. In response to the delays, households reduced the size and number of meals consumed per day, had more debt, sold assets such as livestock, increased the amount of casual labour they were engaged in (both children and adults), reduced health-service use or purchase of medicines, and reduced investments in small businesses; school attendance was also affected, as some families no longer had sufficient funds to purchase uniforms, notebooks and shoes required for school. Participants generally understood that they had been selected for the PSSN because they were deemed vulnerable by community leaders, but they did not always understand the precise eligibility criteria. They also did not fully understand why they received the amounts they did. Similarly, they felt that the PSSN payments were a gift and, therefore, did not feel they had the right to query payment delays.

In the interviews, participants said that they did not understand why the delays had occurred. A 46-year-old female head of a household said, "At first [the payments] used to come early… Now that they come late we don't understand the reason why... I can't know". An 82-year-old male living with his young granddaughter said that the delays had been so long that "we thought that they had eliminated PSSN".

The delays and stoppages had a variety of impacts on households. "There was a lot of distress and we suffered a lot", said one participant, a 50-year-old widow. As a result of the poverty experienced the study sample, even small amounts of money could

change the options that were available to households and have long-term effects. Participants discussed changes in adult and child work, increased debt, effects on children's education and inability to access health care among other perceived impacts. A common coping strategy for adult household members was to make changes to the work they did, particularly in looking for casual labour opportunities. Children's work also reportedly increased or shifted towards paid work in some cases.

Other common responses to PSSN payment delays were reduced consumption and delayed purchases. Several households noted that the delays affected the amount of food they could afford to buy. Meals were reduced and became less varied, as households relied on staples like *ugali* and potatoes. Furthermore, a few participants reported that they were unable to pay for necessary healthcare during the payment delays. PSSN payment delays led many participants to become indebted to businesspeople, schools, landlords and neighbours.

Investments in livelihoods, such as purchases of seeds, fertilizer and livestock, were delayed, with resulting impacts on the amount of food that could be grown and the number of animals that could be bred and sold. Children faced consequences at school when they tried to attend without the correct uniform or supplies, which their caregivers could not afford in the absence of PSSN funds. Increased labour participation also reduced the time available to some children to study. Other children were prevented from studying or attending school due to hunger.

Despite the widespread impacts of payment delays, we did not find evidence that payments were exacerbating gender inequalities, nor did we find that coping strategies were gendered. The interviews did not present any evidence of gender bias in spending when comparing expenditure on males and females in the household. Generally, participants did not distinguish between the children in their household by gender. For example, a 44-year old male participant raising nine children, including several orphans, said, "I buy together, then I divide among them… like notebooks, I buy and divide to all of them equally, each one". Several participants noted that males and females needed different types of item, but that both sexes were supported. A 50-year-old female raising five children explained, "Girls get more than boys because they have very many expenses when they grow up… They begin monthly menstruation. When girls grow up, they up they need soap and more clothes than boys… It is not [the] same as boys". We did find, however, that pre-existing patterns of work and divisions of labour were gendered in this sample. For example, women and girls did more cooking and housework, while men and boys were more likely to engage in waged labour. Male and female household members both participated in farming activities, particularly on family-owned or rented fields.

In summary, the participants perceived that the payment delays had real impacts on their households, and this was seen through changes in labour, debt levels, schooling and health-service seeking. Nevertheless, these coping strategies did not appear to be gendered; nor did the payment delays exacerbate existing gender inequalities.

14.7 Implementation and its influence on gender equality outcomes

Compliance

Gender norms may influence who participates in a programme and what economic activities they decide to engage in as a result of training and productive grants, as well programme design and implementation aspects. Qualitative data reveal that non-participation in/compliance with the programme (48 per cent uptake rate) or attrition from programme activities may have been influenced by the livelihood context in the communities, and how opportunities may be influenced by gender norms. In some communities, the youth migrated for seasonal work such as the timber trade (locally called *msimu*) in Mafinga or tea plantations in Mufindi. In these districts, females often migrate during tea-picking seasons or to work as domestics. This trend may have affected who participated in the programme or who was lost to follow-up since, as one facilitator said, "most of them [who migrate] were within our beneficiary age range" (UNICEF, 5 November 2021). Nevertheless, as reported in the round three report of this evaluation, females were more likely to attend training for the cash-plus intervention than males (Tanzania Adolescent Cash Plus Evaluation Team, 2020b).

Multifaceted approach to implementation

The multifaceted approach, which addressed gender-equality issues from three angles – health information and access to services, information sessions on gender and harmful gender norms, and a focus on structural factors such as poverty – had a positive role. One component – the productive grant – was intended to enable youth to overcome economic challenges and was reported to have generated its own momentum among female participants. For example, the success that was achieved by some female youth entrepreneurs elevated their social standing in the community, and the confidence they developed through the training enabled them to resist the temptation to succumb to risky sexual behaviour and, instead, to focus on their economic projects (TACAIDS Key Informant, 29 January 2021).

Recruitment and training of mentors and peer educators

Gender sensitivity was evident in the design and implementation of the programme, especially in the recruitment and training of mentors and participants. Not only were facilitators instructed to be gender sensitive but also peer educators and youth beneficiaries were selected according to gender representation. The status and respect that peer educators had within their communities, including among the youth, meant that participants were receptive to being trained by them.

Mixed-sex training

Youth and mentors reported positive attitudes towards the mixed-sex livelihoods and SRH/HIV life-skills training, which they cited as the main influence on changing their perceptions on gender attitudes related to sexual health. Generally, the youth found this arrangement useful in terms of educating males about females and vice versa, as this interview extract reveals:

R: Truthfully, I thought it was quite good to study in mixed sessions without discrimination, so that we could all [receive] education.

I: What are some of the benefits to training both females and males together?

R: You share views, such that if there is something you didn't know, it can be explained to you. You share everything openly and guide one another, without restriction, that this concerns [males] or this concerns [females]. You all share with complete openness.

I: Which sessions, in your opinion, should have been better separated with males and females taught separately and not mixed?

R: Perhaps for [females], the sessions about family planning.

I: Why do you think they should have been separated, with females sitting together and males sitting together during these sessions? Why would it have been better? What hardships or challenges did you face?

R: Because they [males] see that they, too, are not knowledgeable in the subject; therefore, if they are taught [separately], [then], if they are later mixed and talk about these things, they wouldn't find it strange because they would already know about it.

I: So, when you were together and you were taught such a topic, what were [the males] doing or how did they behave when you were learning?

R: They were surprised or sometimes they laughed.

I: Which topic surprised them most?

R: When they talked about menstruation, about the blood coming out of the female reproductive organs… [laughter]

I: They laughed? How did the girls feel when they laughed like that?

R: We felt bad.

(Interview with female, 20 years old, single, completed Standard VII, Village 1113, 29 January 2021)

Positive attitudes towards the mixed-sex training were also expressed by mentors and peer educators, who noted a firm appreciation of the interaction between male and female youth offered by the training. One of the trainers commented, "Bringing together youth of different sex[es] who come from different backgrounds, where the gender mix in training on sexual and reproductive health is not custom[ary] was an eye opener, which, in the end, cultivated in them [the] confidence to speak about and later address issues related to sexuality or physiological maturity with each other (TACAIDS Key Informant, 29 January 2021).

One example of the positive outcomes of mixed-sex training was male youths' understanding of menstruation and their ability "to see that it is their duty not to mock or to bully… when a [female is menstruating" (TACAIDS Key Informant, 29 January 2021). Another positive outcome was the confidence of youth to pursue HIV testing more openly (TASAF Key Informant, 11 November 2021).

A further result of mixed-sex training was increasing the confidence of female youth in a male-dominated community, which represented a further pathway towards gender-equality outcomes. One implementer (ToT) expressed this sentiment: "At the beginning of the training, the challenge that we saw was of young [females]… [but] gradually they became used to expressing themselves in front of the [males], [and learned] how to express themselves in front of young [males] [which was not the case] because of the local customs and traditions" (TOT, focus group discussion, Mafinga, 2 August 2021).

The training also provided opportunities for young females' ability to learn how to negotiate their expressions of love and healthy sexual relationships, which they had not previously learned from their parents or guardians.

Youth openly communicated their need for more information. Through education, gender-equality outcomes, related to issues such as health-seeking behaviour or entrepreneurship, could be realized. For example, the qualitative data show that HIV knowledge by gender varied across the study communities and was best gauged by youth seeking HIV testing or counselling. One service provider commented on females being more responsive to HIV testing:

[Firstly], because females were more ready to ask about the [health] problems they faced to help them solve them and, secondly, [for] health issues, they were more ready to visit clinics for consultations. They faced many issues arising out of their experience of physiological and biological changes. So, if they experience a slight issue, they become ready to seek consultations more than male youth. So, we find that female youth have benefited more than male youth. Even if you ask at the hospital, you will see that those who have come for consultation are female youth [rather] than male youth. The same is the case for questions on business capital; those who seek advice more are female youth.

(focus group discussion, ToT, Mafinga, 3 August 2021)

This, however, was in contrast to the quantitative findings, whereby we found that males were more likely to seek health services as a result of the cash-plus intervention. Nevertheless, it may still be the case that females are generally more likely to seek services and that, by increasing the likelihood of males to seek services, the intervention is narrowing the gap between genders and thus leading to more gender-equal outcomes in terms of health-service use.

Linkages to SRH facilities, referrals and services

The system of referrals and linkages between violence survivors, communities, health facilities and other referral services is sub-optimal, although this is beyond the capacity of the cash-plus programme. It is possible that traditional norms inhibit peer educators from reporting GBV, so many cases are lost, preventing violence survivors from obtaining the justice they deserve. This weakness in implementation has also hindered the achievement of desired gender-equality outcomes, and we did not find any programme impacts on reporting/seeking formal help for experiences of violence. A programme facilitator observed:

Cases of rape or violence are often not reported because of the poor referral process. For example, when a child in a village is raped and taken to the nearest health facility, the facility claims that it does not have proper laboratory facilities to handle the case and the survivor should be taken to the district hospital with the necessary capacity. But when the case is sent there, it becomes difficult to trace how the survivor has been assisted and information may eventually be lost. Hence, it is necessary to integrate a gender sensitive lens [into] these processes of referrals and linkages on GBV cases since most of the survivors are young females.

(UNICEF key informant, 5 November 2021)

Information barriers to seeking services were noted, reflecting social norms in the community. In some cases, there was no communication between parents/guardians and the youth about HIV and the necessity of constantly taking antiretrovirals (ARVs). Nevertheless, through peer educators and mentors, these youth were able to obtain information and better understand their condition and personal responsibility for their own health. An initial challenge faced by the programme was convincing parents/guardians of the rights of youth to receive accurate information on HIV. This required sensitization of both the youth themselves and their parents/guardians (UNICEF Key Informant, 5 November 2021).

Overall, qualitative research found that several implementation factors may have influenced the achievement/sustainability of the various gender-equality outcomes identified in Section 14.5 (and in previous rounds of data collection). The multifaceted nature of the intervention addressed multiple gendered vulnerabilities, with some components, such as the productive grant, economically empowering females and improving their social standing and confidence to avoid risky sexual behaviours. The

information sessions likely facilitated the effectiveness of the livelihoods and SRH training component. This was further reinforced by the gender-sensitive recruitment of mentors/peer educators. Gender representation was cited by key informants as an important factor in the program's success and mixed-sex training was appreciated for removing the gender divide in conversations around SRH and livelihoods and for building confidence among females, enabling them to negotiate healthy sexual relationships. However, gaps in the referral system within these communities was identified as a factor that prevents survivors reporting/seeking formal help for violence experiences.

14.8 Moderating programme effects of contextual factors

In this subsection, we examine how contextual factors moderated the long-term impacts of the cash-plus programme. We consider three main types of moderator: gender norms, access to markets and infrastructure (including schools), and quality and accessibility of health services. For instance, the impacts on starting a business or visiting a health facility could be moderated by community- or local-level characteristics such as access to markets, local economic opportunities and the availability, affordability, accessibility and quality of services. Gendered social norms are also likely to moderate programme impacts on gender-equality outcomes such as contraceptive use, violence, marriage and schooling. We carried out additional quantitative analyses to understand these potentially moderating impacts. Specifically, we sought to understand whether the programme impacts, described in Sections 7 to 13 and summarized in Section 14.5, varied under different contextual circumstances, such as norms, access and quality of services, and economic opportunities.

We rely on the community and the health-facility questionnaires to construct the measures of moderators. Most of the relevant questions used to measure gender norms had five possible answers that were measured on a Likert scale from one to five, with responses ranging from 'disagree a lot' to 'agree a lot' (higher values indicate more progressive social norms). To obtain indexes of gender norms, a principal component analysis was run for items within each dimension and the first component was considered. The individual score was then predicted and a binary indicator was created, equal to one if the score was above the median value.

Specifically, we examined the following social and gender norms and related community-level questions:

- Norms about *male behaviour towards females when the latter express willingness to use contraception*. The index was constructed based on responses to the following statements: "If a woman or adolescent female asked her partner to use a condom, he would get violent." "If a woman or adolescent female asked her partner to use a condom, he would think she is having sex with other people."[59]

59 Adapted from the Gender-Equitable Men (GEM) Scale.

- Norms on the *importance of female schooling compared to that of males*. The index was constructed based on responses to the following statement: "In my community, school is considered equally important for both adolescent females and males."[60]

- Norms regarding *women's role in the home and outside the home*. The index was constructed based on responses to the following statements: "Most people in my community accept women working outside the household or doing business." "Most people in my community think it is fine if women earn a higher salary than their husbands" "A woman's role is taking care of her home and family."[61]

- Perceptions of *child marriage*; The index was constructed based on responses to the following statement: "We should stop marrying children under 18 in my community."[62]

- Perceptions of *female decision-making*, measured by responses to 'In general, how much is female opinion considered in families around here?'[63]

We refer to the norms described above as collective norms as they measure the level of influence at the level of the community or society. When we asked individuals to report on the existence of social norms in their community, however, we were measuring those individuals' *perceptions* of norms, as we administered one questionnaire per community to a community leader or another knowledgeable community member. Moreover, social norms are difficult to measure; hence there is a need for caution when interpreting the findings. A further limitation to consider when interpreting the results of this analysis is that communities included in the sample were all similar. Therefore, there was less variation in norms and services than there would have been if comparing all regions of a country or different countries. Moreover, the study was not powered to detect programme impacts when additional restrictions were imposed (such as carrying out a heterogeneous analysis to examine moderating effects by contextual factor). This means that, in some cases, we may not have detected significant moderating impacts even if contextual factors and norms were moderating the effects of the intervention because a larger sample size would be needed to detect these impacts.

We measured access to services and economic opportunities at the community level through an index constructed with the following indicators: (1) village has a farm or big village; (2) village has a daily market; (3) there is a secondary school in the village or the nearest school is less than 5 km away and (4) there is a mini-bus to access the daily market. Like the indices on norms described above, this index was created using a principal component analysis. A higher score indicates better economic opportunities and access to services.

60 Adapted from Tefera, B. and Pereznieto (2013).
61 Own elaboration based on discussion and papers from experts and Global Early Adolescent Study (GEAS) baseline questionnaire to adolescents, <www.geastudy.org/download-the-measures>
62 Based on Steinhaus et al. (2019).
63 Based on Denny and Nwankwo (2015).

Finally, we assessed the quality of health facilities using the Service Availability and Readiness Assessment (SARA) guidelines as a framework (World Health Organization, 2015). Given that our sample focusses on adolescents, we constructed an index of adolescent health-service availability and readiness indicators. The service availability subscale was constructed by averaging the following indicators for the round-four health-facility questionnaire: (1) offers any services to adolescents; (2) conducts HIV testing in the facility, distributes HIV self-tests kits to adolescents, offers HIV resting outside the health facility or via mobile vans; (3) offers family-planning services to adolescents directly or through referrals; (4) carries contraceptive pills; (5) carries condoms; (6) carries emergency contraceptives; (7) carries intrauterine devices (IUDs); and (8) carries ARVs. For the adolescent health-service readiness subscale, we calculated the means of the following indicators: (1) documents outlining procedures for adolescents; (2) staff trained on providing adolescent-friendly HIV services; and (3) male condoms provided by facility (assuming condoms were in stock on the day of the health facility interview and that adolescents were not turned away from the facility). Finally, the overall adolescent health-service quality scale was developed by calculating the average of the service availability and readiness subscales. Households were then linked to the nearest health facilities (based on GPS coordinates) using ArcGIS software.

We have only tested these moderating influences on the primary outcomes on which the study was powered or one or two main outcomes from each of the earlier sections (*see Table 14.1*).

Table 14.1 Overview of moderators and outcomes studied

		MODERATORS						
DIMENSION	PRIMARY OUTCOMES	NORMS ABOUT WOMEN USING CONTRACEP-TION	NORMS ABOUT IMPORTANCE OF SCHO-OLING FOR FEMALES	INDEX ON GENDER ROLES	INDEX ON SER-VICE ACCESS AND ECONO-MIC OPPORTU-NITIES	INDEX ON QUALITY OF HEALTH SERVICES	NORMS ABOUT MARRIAGE	DECISION-MAKING
Sexual risk behaviour	Age at sexual debut			■				■
	Contraceptive knowledge	■		■				■
	Contraceptive use	■		■				■
	Transactional sex			■				■
	Ever been pregnant	■		■				■
Health seeking	Tested for HIV			■		■		■
	Visited a health facility			■		■		■
Mental health	Depressed			■				■
Gender attitudes	GEM scale			■				■
Marriage	Married			■			■	■
Education and livelihoods	School attendance		■	■	■			■
	Started a business			■	■			■
	Engaged in economic activities			■	■			■
Violence	Experienced sexual violence			■				■

Note: cells coloured in green indicate where moderator was tested.

To test how the indicators described above moderated programme impacts, we included an interaction term between the treatment variable and the moderator variable, as well as the moderator (norms, services, health-facility quality). Other aspects of the estimation strategy remain as described in section 3.7.1. We disaggregated by gender when looking at access to markets and quality of health facilities, and we estimated regressions on the pooled sample of male and female youth when analysing gender norms as the moderator was already capturing the gender aspect. To run these interactions, moderators were dichotomized, whereby

one always refers to communities with more progressive norms, or better quality of or better access to services and economic opportunities. We present findings from the regressions that show significant effects of moderators (*see figures 14.1 and 14.2 below*) as well as all other regression findings (*see supplementary online appendix D*). Effects in villages with conservative norms, or villages with low-quality services, are given by the treatment coefficient (participation in the cash-plus intervention), while the effects in villages with progressive nroms, or those with high-quality services, are the result of adding together the treatment coefficient and the interaction-term coefficient.

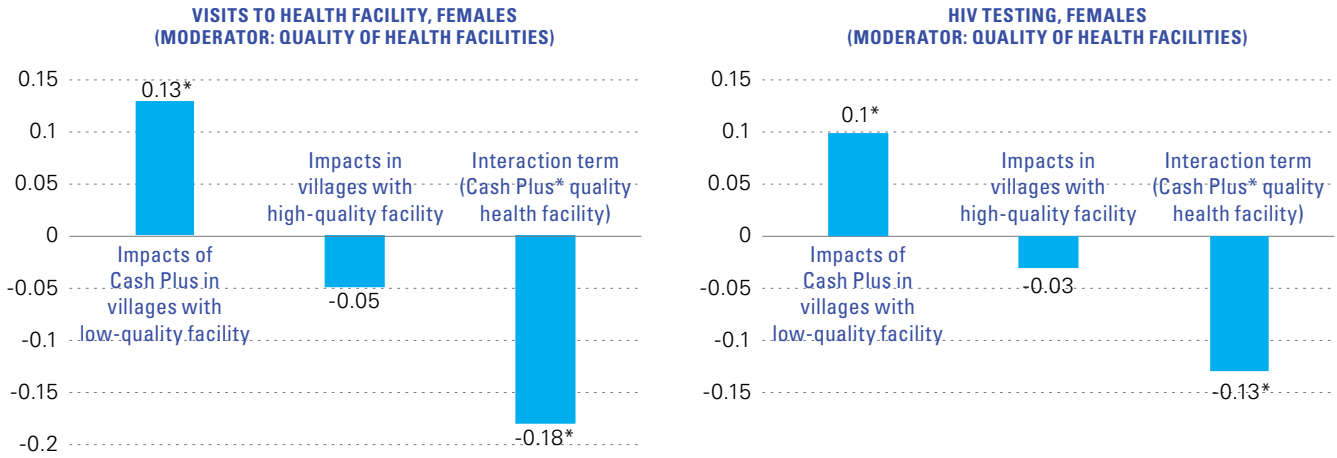
Findings

The quality of health facilities has a moderating effect on the impacts of the cash-plus intervention on visits to health facilities among females. In villages where the closest health facility was defined as low quality (according to the WHO SARA scale), the cash-plus intervention led to a 13 percentage-point increase in the probability of visiting a health facility in the previous 12 months, while in villages where the closest health facility was defined as high quality, the effect was not significant. In the case of HIV testing, also among females, it appears that the cash-plus programme increased HIV testing in villages with low-quality facilities but did not lead to significant increases in testing in villages with access to better quality facilities. Taken together, these findings indicate that the intervention improved the situation among adolescents in communities with poor access to high-quality health services, likely addressing some existing gaps, including awareness about health facilities or better attitudes from service providers.

We also find that norms on contraceptive use had a significant moderating effect. In villages with more conservative norms, adolescents participating in the intervention had lower contraceptive use, while in more progressive villages the intervention did not change adolescents' use of contraception. At the same time, progressive norms regarding women's decision-making appear to have had positive moderating effects on delaying sexual debut, as the coefficient of the interaction between progressive norms and living in a treatment village was positive and significant. When calculating the differential effects of the intervention in progressive and in conservative villages, however, effects were not significant in either.

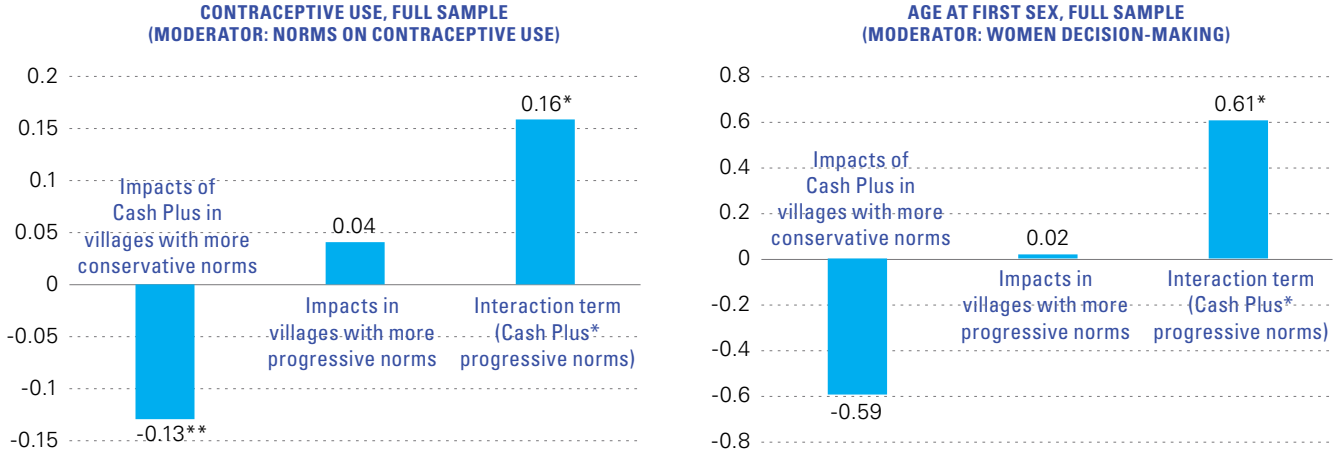
Norms regarding gender roles did not appear to influence any of the primary outcomes studied Similarly, across all outcomes, norms about female decision-making appeared to influence age of sexual debut only. Service access and economic opportunities did not moderate the impacts on running a business or engaging in economic activities, while norms about marriage did not seem to moderate impacts on marriage. Norms about schooling did not moderate impacts on school attendance. Finally, norms about females using contraception did impact contraceptive use, as discussed above, but not contraceptive knowledge or pregnancy status.

Figure 14.1. Moderator effects of quality of health facilities on visits to health facilities and HIV testing



Note: Regressions control for gender, age at baseline, PAA × size fixed effects. Standard errors are adjusted for clustering at the community level. * p <0.05, **p < 0.01.

Figure 14.2. Moderator effects of norms regarding contraceptive use on contraceptive use (left) and of norms regarding female decision-making on age at sexual debut (right)



Note: Regressions control for gender, age at baseline, PAA × size fixed effects. Standard errors are adjusted for clustering at the community level. *p < 0.05, **p < 0.01.

Qualitative interviews revealed how gender norms shaped perceptions of behaviour and community acceptance of the programme and potentially influenced the effectiveness of the SRH-training component of the intervention.

Implementers reported that although they perceived adolescent SRH education as beneficial for the youth, it was not always well received by communities with traditional expectations (conservative norms). Some community members did not appreciate the provision of SRH education to adolescents/youth, especially to those who were unmarried. This may have influenced the take-up rates of and attendance at the training sessions by adolescents. To a certain degree, however, apathy and the negative perceptions of some parents/guardians towards SRH education were

partly addressed by introductory community meetings. The intention to engage youth on the topic of adolescent sexual health was introduced to community and faith leaders in these sessions. Similarly, community resistance to teaching females about reproductive health was overcome, to some extent, by sharing facts about the plight of young females, especially concerning teenage pregnancy (TASAF Key Informant, 11 November 2021). These qualitative findings complement the quantitative results on the negative influence of conservative norms on the impact of the cash-plus intervention on contraceptive use and sexual debut.

A further manifestation of the influence of social/gender norms was that early marriages continued. This practice is seen as normal, especially for females after they have completed school. To some extent, this practice undermined the intervention's objectives of reducing early pregnancies and marriage, as no programme impacts were found on these outcomes during quantitative analysis. Females, themselves, expressed a fear of being unmarried after the expected age. One of the ToTs said, "A challenge [the programme encountered] was for some young females who got betrothed and got married … So, they went to start another life and then could not continue with their projects anymore" (ToT, focus group discussion,Mafinga, 2 August 2021).

Overall, qualitative interviews highlighted the entrenchment of gender norms and influencing community perceptions/norms on gender equality and the rights of male and female youth to reliable and accessible SRH education was not often simple. One of the training facilitators remarked that traditions take time to change. Despite the cash-plus intervention objectives being focussed on addressing gender inequalities by positively influencing traditional gender attitudes, the realization of changes in gender norms is complex. Indeed, this intervention did not aim to change norms or community-level attitudes, but rather it aimed to change attitudes at the individual level among participating adolescents. Changing gender norms at the community level and beyond would require different types of activity and intervention. These findings on the moderating role of gender norms are also relevant for informing the strengthening of the gender-transformative potential of all components of the main PSSN programme (CCT, livelihoods and public works), including for the next phase. For instance, the different life stages covered by the social and behaviour change communication framework of PSSN II could integrate a focus on addressing gender norms on preferential feeding practices of either boys or girls, investment in schooling, adolescent transitions to adulthood (e.g., SRH behaviour, marriage, pregnancy), work and the division of labour.

In summary, the quantitative analysis underscored the limited role of service access and gender norms in moderating programme impacts (notwithstanding methodological limitations such as small sample size, small variation between communities in terms of norms and services, and challenges in measuring norms, all of which limited our ability to detect such moderating effects). There were some exceptions, such as conservative norms regarding contraceptive use leading to adverse programme impacts on

contraceptive use and progressive norms regarding female decision-making leading to the intervention being effective at delaying sexual debut. Qualitative interviews with trainers supported these findings and highlighted the challenges of improving certain outcomes in contexts with entrenched conservative norms, as well as the importance of sensitizing parents/guardians, community members and also programme implementers before the delivery of the intervention. At the same time, it appears that the intervention led to increased health-seeking behaviour (visits to facilities and HIV testing) among adolescents in communities with poor access to high-quality health services, illustrating how information and linkages can improve some outcomes and address some access issues in underserved communities.

15. Conclusion

The Ujana Salama cash-plus model for youth well-being and safe, healthy and productive transition to adulthood was a unique, multi-sectoral, government-implemented pilot intervention targeted at vulnerable adolescents in extremely poor households that were participating in the Government's flagship social protection programme (PSSN). This pilot programme ran from 2018 to 2019 and was evaluated via a longitudinal, mixed-methods impact evaluation (2017–2021).

We collected data from youth, households, community leaders and health facilities in participating communities four times between 2017 and 2021 to understand how the programme was changing the lives of participating youth and their families, and whether these impacts had endured after the end of the intervention in mid-2019. Across three rounds of follow-up surveys (in 2019, 2020 and 2021), the intervention was found to have improved the lives of participating adolescents across several domains. These included increasing economic participation, increasing gender-equitable attitudes, improving mental health, SRH knowledge and health-seeking, and reducing violence.

The intervention had several components that were delivered sequentially, including face-to-face training (delivered between January and May 2018), mentoring (June 2018 to April 2019), health-facilities strengthening (July 2018) and productive grants (disbursed in April and July 2019). Therefore, estimated impacts at different time points reflect different combinations of these components and varying durations of exposure. This report focusses on impacts at the time of the round-four follow-up, conducted in 2021, approximately two years after the end of the programme.

Contextual factors are important in understanding the impacts (or lack of in some instances) of the intervention. Two important factors may have contributed to dampening intervention effects between rounds three and four: PSSN payment delays (between March 2019 and September 2020) and the COVID-19 pandemic (March 2020 to round-four data collection in January–March 2021). These negative income shocks may have required participating youth and their households to redirect resources to food and other basic needs. In the absence of these events, they would have been able to direct more resources to investments in schooling, businesses or health-related outcomes, further amplifying programme impacts. These factors may have mitigated some of the potential positive benefits of the cash-plus intervention. Although payments had resumed prior to the round-four data collection, households may still have been recovering from the significant loss of income. While these adverse events (payment delays and the COVID-19 pandemic) likely affected treatment-group and control-group youth in similar ways, without them, adolescents may have been able to further leverage their training and productive-grant investments.

To put these round-four findings in context, we briefly describe findings from previous rounds below and then discuss in more detail findings from round four and their implications, ending with recommendations for future research and programmes.

At baseline, our analysis demonstrated that despite living in households benefiting from the PSSN social-protection programme, adolescents still faced myriad challenges to a safe and productive transition to adulthood. Therefore, it was hoped that the cash-plus intervention could close some of the gaps and help adolescents further leverage benefits from the PSSN programme for safe, healthy and productive transition to adulthood.[64]

From the round-two data collection in 2018, just after adolescents had received 12 weeks of face-to-face training, we found that the intervention had positive impacts on knowledge about some aspects of HIV prevention and contraceptive use, gender-equitable attitudes and participation in economic activities (livestock rearing). At that time, approximately three months after exposure to training, we expected knowledge and attitudes to have changed, whereas we expected behavioural changes to take longer. Thus, we hypothesized that we would see more changes in economic activity, experience of violence, relationship dynamics, marriage, pregnancy and other behaviours later, that is, in round three and beyond.

As hypothesized, we found impacts on more outcomes in round three (26–28 months after baseline) after the delivery of mentoring and productive grants. For example, the intervention led to: an increase in aspirations to own a business; increased participation in economic activities; changes in entrepreneurial attitudes; changes in gender-equitable attitudes; greater contraceptive and HIV-prevention knowledge; more HIV testing; and more visits to health facilities. The intervention also led to improvements in mental health and self-esteem, and it had protective effects in regard to sexual violence and a reduction in the perpetration of violence. At that time, we did not find any changes in the following areas that could be attributed to the programme: subjective well-being, social support, migration intentions, marriage/cohabitation, contraceptive use, age-disparate sexual relationships, perceived HIV risk, condom use, transactional sex, pregnancy, experiences of emotional or physical violence, or reporting (help-seeking) related to experiences of violence. Additionally, we found an unintended adverse impact on secondary-school attendance, driven by the subsample of females. However, there were no programme impacts on school attainment (highest level of education completed). On a positive note, we did not find any increases in work-related hazards, engagement in household chores or self-perceived stress. Furthermore, we found an adverse effect on timing of sexual debut in round three, whereby treatment-group females debuted earlier than those in the control group.

64 Analysis showed that, in this cRCT study design, the randomization was successful and the baseline equivalence of treatment (PSSN plus) and control (PSSN only) groups was confirmed over a large number of indicators across domains as diverse as education, livelihoods, HIV knowledge and testing, contraceptive use, HIV/SRH access, experience of violence and mental health.

In round four, we repeated the analysis of schooling impacts in view of the unintended, adverse effects on school attendance found in round three. These adverse impacts were no longer evident in round four as the vast majority of youth in both treatment and control villages had permanently left school by then. Our analyses did not find impacts on educational attainment (highest grade completed), which remained similar for treatment-group and control-group youth across survey rounds from baseline to round four. Thus, the adverse effects on school participation found in round three did not translate into lasting effects on educational attainment for youth participating in the cash-plus intervention.

As described above, in round four, we found several sustained impacts of the cash-plus programme. Inclusivity for adolescents at health facilities improved over time and community outreach efforts in relation to HIV-treatment services for adolescents also increased. However, there was a reduced supply of contraceptives, including condoms, in the most recent round of data collection, which may reflect global supply-chain issues caused by the COVID-19 pandemic. In terms of economic activities, we found several sustained positive impacts. Treatment-group youth were more likely to be running a business than control-group youth and there were positive impacts on revenues and profits. Treatment-group youth also spent more time on economic activities, including livestock keeping and farm work for the household, and they had higher vocational aspirations, both of which were a result of the intervention. Observed impacts on economic participation and time spent on economic activities were driven by the female subsample, consistent with the results from round three. Among females, we also observed higher engagement in care work within the household. In qualitative interviews, both mentors and youth mentioned linking youth to professionals or technical officers in their economic areas of interest as a lasting, positive benefit of the intervention. In terms of health benefits, we found sustained impacts on male use of health services and females' knowledge of where to seek contraception and pregnancy tests, as well as on protective effects against reports of sexual violence by females throughout their lifetime.

In round four, there was also some evidence of previously undetected impacts, including lower self-perceived risk of HIV and increase in exposure to hazards in the work environment as a result of the intervention. We also found that, while the intervention did not affect pregnancy rates among females in the sample, it increased the likelihood of males reporting that their partners were or had been pregnant. This latter finding is neither positive or negative, as the study population had aged (18–23 years at the time of the round four interview) and had reached the stage of life considered appropriate for childbearing in this context. Indeed, among treatment-group males whose partners were or had been pregnant, 56 per cent were married and 31 per cent were in a romantic relationship. The increased likelihood of treatment-group males having a child may reflect their relatively better economic situation compared to control-group youth.

Some of the impacts identified in rounds two and/or three were no longer apparent in round four, including protective impacts on mental health (indeed, in round four, treatment-group youth had more depressive symptoms than those in the control group), positive impacts on gender-equitable attitudes, increased knowledge of contraceptives, positive impacts on HIV knowledge and testing, and reduced perpetration of violence.

Multiple contextual factors mean that the interpretation of some of the evaluation findings is challenging. For example, for outcomes where we see no impacts or unsustained impacts in the final round, we cannot say with confidence whether the intervention, as currently designed and implemented, is unable to effect change in these outcomes or whether external factors (PSSN payment delays and the COVID-19 pandemic) interfered with and dampened effects that might have been detected in different circumstances. We can say with confidence, however, that the intervention increased aspirations and activities related to economic endeavours, which will likely have continued positive benefits for these youth and their families. The intervention also had positive and sustained impacts on health-related knowledge, including where to seek services, and protective effects against sexual violence. In this way, the intervention positively contributed to safe and productive transition to adulthood. Some outcomes that the intervention was not able to address in a sustainable manner (or at all) highlight areas where alternative programmes might be more effective or where other contextual factors, such as gender norms and gendered opportunities and constraints, need to be addressed before any programme or policy targeted at adolescents can effect true transformational change. As highlighted by Baird et al. (2021), marginalized females and males navigate disadvantage that is structurally embedded (Baird et al., 2021), and we can only improve adolescents' opportunities by first addressing the inherent inequality in these structures. To that end, gender inequality is embedded in many structures and thus, in the current report, we took a closer look at how the intervention and its implementation affected gender-equality outcomes.

First, we examined how PSSN households coped with continued payment delays over an 18-month period between 2019 and 2020, how these delays affected intra-household family dynamics and outcomes, and whether coping strategies may have been gendered. We found that PSSN participants felt that the PSSN payments were a gift and thus did not feel that they had the right to query payment delays. These delays exacerbated the economic insecurity households were experiencing as a result of the COVID-19 pandemic. In response to the delays, households reduced the size and number of meals they consumed per day, had more debt, sold assets such as livestock, increased the amount of casual labour that they were engaged in (both adults and children), reduced health-service use or the purchase of medicines and reduced investments in small businesses; school attendance was also affected. Some families no longer had sufficient funds to purchase uniforms, notebooks and shoes required for school. Some children had less time for studying as they were engaged in increased labour activities while others were prevented from studying or attending school due to hunger. We did not find evidence that payments were

exacerbating gender inequalities, that spending patterns differed by a child's gender or that coping strategies were gendered.

Nevertheless, many of the estimated impacts were gendered. These differential impacts were unlikely to be driven by the intervention itself, but rather by contextual factors, such as existing gender norms, as well as by implementation aspects, such as the role of mentors and their own attitudes and norms. We found that several implementation factors may have influenced the achievement/sustainability of various gender-equality outcomes. Interviews with programme implementers (including mentors) and stakeholders underscored how the productive grant empowered females economically and also improved their social standing and confidence to avoid risky sexual behaviours. The gender-sensitive recruitment of mentors/peer educators (with appropriate gender representation) was cited as an important factor for success, and mixed-sex training was appreciated for removing the gender divide in conversations about SRH and livelihoods. Gaps in the referral system within communities were, however, identified as a factor in preventing survivors reporting/seeking formal help for experiences of violence.

We also found a limited role of service access or gender norms in moderating programme impacts, with some exceptions such as conservative norms leading to adverse programme impacts on contraceptive use and progressive norms regarding female decision-making leading to more protective outcomes in terms of delaying sexual debut. At the same time, it appears that the intervention led to increased health-seeking behaviour (facility visits and HIV testing) among adolescents in communities with poor access to high-quality health services. Qualitative interviews highlighted the challenges of improving certain outcomes in the context of entrenched norms, as well as the importance of sensitizing parents, community members and programme implementers on adolescents' SRH needs before implementing similar interventions.

An innovative strength of this evaluation is that, for the first time, it reports the findings from a cash-plus intervention targeted at adolescents that has been implemented by an African government. As the intervention was implemented by the Government within the structure of a large, national social protection programme, it has a high potential for scalability and sustainability. Indeed, the intervention has been upscaled to an additional region since the end of the pilot project described here. A further strength of the intervention was that it intentionally targeted socially marginalized adolescents and youth by working through the PSSN programme, which targets the poorest 10 per cent of households nationally. The study meets high academic standards for impact evaluation, with a cRCT and mixed-method data collection on over 2,000 adolescents and youth who were followed for four rounds of data collection between 2017 and 2021. Attrition rates were within expected ranges for this population, based on comparisons with similar studies. The data from youth are triangulated with detailed information collected from households, communities and health facilities. An additional study strength is the estimation of ITT impacts, which reflect the kinds of impact that might be expected when the programme is

upscaled among PSSN households in other areas. Results from this study have a high level of generalizability because our sample is population based (among PSSN households) in four districts, making our results representative of similar populations to those examined in this study. Moreover, this study covers a unique combination of economic and health-related indicators of well-being.

A group of experts on adolescence recently highlighted how certain cohorts of adolescents are at a heightened risk of exclusion within broader processes of development (Baird et al., 2021). The current study underscores how strengthening capacities can increase adolescent well-being. The programme design intentionally leveraged programming that looked beyond the individual in recognizing structural problems such as poverty (by working through the PSSN) and access and quality of health services (by strengthening adolescent-friendly services and public-health facilities). Nevertheless, one programme cannot address all existing structural drivers of multidimensional poverty and more work is needed. This includes increased national investment in public infrastructure and the promotion of labour-market conditions that can facilitate fair competition and labour-intensive job growth. More also needs to be done in terms of expanding social protection coverage, including social health protection as well as other forms of social protection to address needs across the lifecycle.

Findings from this study also provide insights related to the implementation of multisectoral programmes seeking to address multidimensional vulnerability. Embedding the initiative within an existing Government programme (the PSSN) with strong Government ownership was key to the pilot project's success. Furthermore, involving the community in all phases from the start, including the randomization of communities to treatment or control arms, as well as leveraging community expertise, in the form of mentors and peer mentors, facilitated culturally appropriate implementation, trust in programme personnel and sustainability (as these resources will not leave the community after the end of the programme). The cash-plus pilot intervention took account of the local context in terms of available resources and the different needs of females and males (gender sensitivity), which also contributed to its successful implementation. A key aspect of the pilot project was its intersectoral nature, linking productive inclusion initiatives with health services. Ensuring that these linkages were reinforced at different levels (i.e., national, regional, district and community) and that individuals working at the local level understood the motivation for the programme linkages were key to ensuring that they were implemented as intended for maximum impact.

A recent review of adolescent-sensitive social-protection programming has highlighted that, despite the expanded coverage of social protection globally, adolescents have among the lowest rates of coverage (Cirillo et al., 2021). The authors have highlighted that this is a missed opportunity for investment in a key period of development and have outlined that social protection can be adolescent-sensitive, based on design choices such as targeting, payment mechanisms, variable amounts of payment, conditionalities and complementary programming/linkages to services. The review

argued that further research was required to examine the impacts of integrated social-protection programming, and this study helps to address this identified gap. The cash-plus programme evaluated here is an example of gender- and adolescent-sensitive social protection as it aims to addressed gendered and age-specific vulnerabilities through adolescent-sensitive targeting and linkages to services.

Results from the study reported here can be used to inform further adaptations of the programme prior to additional upscaling. Findings can also be used to motivate adaptations of social protection in other contexts for programmes that aim to empower adolescents and facilitate their safe transition to healthy and productive adulthood. In addition to the positive findings from this study, lessons can also be learned about what might be needed to sustain the impacts of similar programmes, including stronger labour markets in which adolescents can reap the benefits of increased educational attainment, more equitable gender norms in communities and greater access to high-quality schools and vocational training.

Our study also has some limitations. Behaviours and attitudes were self-reported and therefore responses may have been subject to biases, including social desirability bias and underreporting of sensitive experiences such as sexual violence. However, this should not affect the internal validity of the study because we do not expect underreporting to vary systematically between treatment and control groups. A further limitation is that the study design enabled us to detect the impacts of the 'plus' component only rather than the impacts of the combination of the cash and cash-plus components. We could not detect synergies resulting from this combination.[65] An additional limitation of the study is that data for measuring the influence of moderating/contextual factors, such as gender norms, were based on the responses of one respondent from each community. Therefore, they are perceptions of norms of one individual only. Community norms are also difficult to measure in a quantitative sense. Finally, the study was not statistically powered to detect the heterogenous effects of contextual factors. Hence, caution is warranted when interpreting the findings.

Research recommendations:

1. Replicate the intervention and evaluation in a different setting to examine whether the findings are replicable in a different context and how contextual factors might influence impacts. Identify effective intervention components, synergies and the influences of contextual factors through systematic reviews of similar types of multisectoral programmes for adolescents.

2. Conduct research on contextual barriers to schooling and learning, including school quality and the relevance of the school curriculum in relation to youth aspirations

65 This is largely because the cash component of the PSSN was rolled out in 2015, whereas the cash-plus intervention was rolled out to youth in 2018. As the cash component started before the cash-plus component, it could not be randomized in combination with the cash-plus component to create multiple treatment arms, which would have enabled us to understand these additional and/or synergistic impacts.

and existing labour-market opportunities. The role of gender norms in shaping education and employment opportunities also needs to be further investigated.

3. Carry out research to understand the synergistic impacts of 'cash' and 'plus' components, as the current study measured impacts of the 'plus' element only. This requires a more complex study design with at least four treatment arms (cash only, plus only, cash plus and control), which explains why few existing studies have been able to estimate the synergistic impacts.

4. Perform longer-term follow-up of the sample in this study (and other similar studies examining bundled interventions targeted at adolescents) to understand whether these adolescent-targeted interventions continue to have benefits in early adulthood, including for health, economic empowerment and intrahousehold bargaining, and to discover whether there are intergenerational impacts (e.g., on the adolescents' children).

Programmatic recommendations:

1. Ensure access to vocational training, for example, through tuition and boarding vouchers or other interventions that address cost barriers.

2. Ensure that the cash-plus training curriculum and its implementation methods are designed to incentivize schooling and training, which are likely to provide more and better opportunities to youth in the long term, compared to immediate business opportunities. These efforts should include the facilitation of skills training through linking youth with existing vocational services and coordinating with organizations that can provide apprenticeships and other opportunities.

3. As this and similar programmes are upscaled, strengthen cross-sectoral coordination and systems, including linkages to HIV and SRH services. The training in our study led to increases in knowledge and the combined intervention led to some improvements in behaviours (HIV testing, use of services). Nevertheless, other behavioural outcomes such as use of contraceptives did not increase, indicating that gender norms and other barriers may restrict adolescents' capacity to use contraception even when they know about it, and thus additional efforts are needed. Additionally, efforts are needed to normalize continued HIV testing. At the same time, interventions such as this, which targeted individuals' knowledge, may need to be complemented by community-level interventions aimed at changing norms that inhibit females' health and constrain their economic opportunities. Without such efforts to change norms, individual-level interventions may have more limited impact, and multi-level interventions may be needed for more transformative change. Similarly, findings that programme impacts were stronger in underserved areas (defined by lower service quality) also indicate that health services should be strengthened to better meet the needs of adolescents and youth.

4. Strengthen gender-based violence referrals and response services. Despite protective impacts on sexual violence, the intervention did not have any impact on formal reporting of gender-based experiences of violence among survivors, and reporting rates remained low (less than 10 per cent) throughout the period studied, reflecting a lack of perceived support or benefits from accessing formal sources. This suggests that there is room for improving the awareness of survivor-support services as well as their quality and accessibility.

5. Consider the important gender lens in economic-empowerment programming. Poverty is gendered as women are at a higher risk of poverty and often have fewer resources to cope with shocks, which further exacerbate the risk of poverty. It is important not only to target women but also to address structural drivers of poverty, including gender norms.

6. Implement broad gender-norm interventions to maximize the impact of interventions such as cash plus. Relatedly, such interventions may also be relevant for strengthening the gender-transformative potential of all components of the main PSSN (CCT, livelihoods and public works) programme, including the next phase.

7. Improve coordination between development partners and the linking of their services. This can help address the multidimensional needs of vulnerable adolescents and also complement programming in a cost-effective manner.

8. Findings from the analysis on coping strategies in response to payment delays suggest that the following actions are needed:

    a. **Improve communication with participants**: Educational efforts should be made at times of payment to remind participants about their eligibility characteristics, payment amounts (including variable amounts), co-responsibilities and penalties for non-compliance. Future payment delays or changes to the programme, including plans to conduct recertification or resulting changes in eligibility, should include clear communication plans.

    b. **Implement case management:** Case management can help identify complementary services, which might address the multidimensional effects of poverty, and/or alternative sources of support, which might address schooling and health-related needs.

    c. **Continue monitoring households**: Households affected by payment delays as well as those that 'graduate' from the PSSN should be followed-up to monitor any longer-term adverse impacts or vulnerability to re-entering poverty.

    d. **Strengthen grievance mechanisms**: Mechanisms should be strengthened so that participants know that they have the right to social-protection benefits and understand how to ask questions or communicate with programme implementers about problems when they occur.

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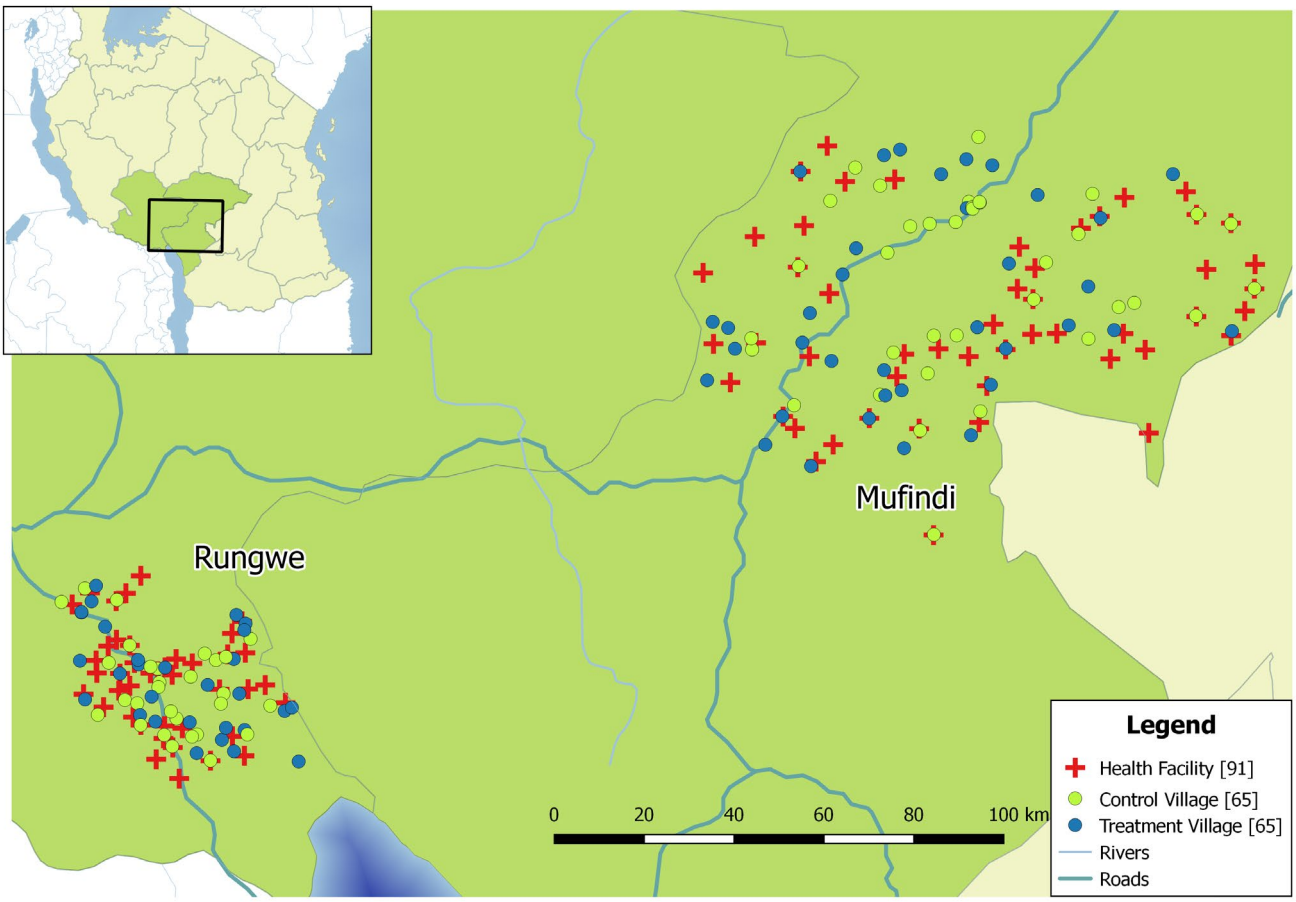
Appendix A. Study map

Map A.1. The Cash Plus Programme study areas



Appendix B. Attrition

Table B.1: Differential attrition

DEPENDENT VARIABLE:	INTERVIEWED AT ROUND 4
Treatment	0.003
	(0.02)
N	2,458
Average in the control group	0.16

Notes: The regression includes PAA x size fixed effects. Standard errors in parentheses, clustered at the community level.

Table B.2: Baseline balance of household structure indicators, by panel and attritor status

	ATTRITED			PANEL			DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	P-VALUE	CASH ONLY	CASH PLUS	P-VALUE	COL(1)-COL(4)	P-VALUE	COL(2)-COL(5)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Household size	4.15	4.63	0.02	4.74	4.80	0.53	-0.59	0.00	-0.18	0.30
Dependency ratio	1.12	1.24	0.44	1.07	1.11	0.52	0.05	0.59	0.12	0.16
At least one biological parent of youth in the household	0.58	0.59	0.90	0.67	0.67	0.83	-0.08	0.04	-0.08	0.05
At least one grandparent of youth in the household (absent parents)	0.34	0.35	0.84	0.30	0.29	0.61	0.04	0.33	0.06	0.12
Parents and grandparents of youth are absent (youth live with other relatives)	0.08	0.06	0.56	0.03	0.04	0.41	0.05	0.05	0.02	0.38
At least one orphan youth in the household	0.11	0.15	0.45	0.14	0.14	0.90	-0.03	0.36	0.01	0.78
Head female	0.70	0.70	0.99	0.67	0.64	0.12	0.02	0.60	0.06	0.05
Head age	59.15	61.64	0.26	58.51	58.52	0.88	0.64	0.58	3.12	0.06
Adult highest grade of education: none	0.24	0.29	0.47	0.22	0.22	0.97	0.02	0.48	0.06	0.07
Adult highest grade of education: some primary	0.10	0.15	0.16	0.11	0.12	0.56	-0.01	0.59	0.03	0.28
Adult highest grade of education: primary	0.43	0.35	0.14	0.42	0.43	0.66	0.01	0.86	-0.08	0.03
Adult highest grade of education: some secondary	0.23	0.21	0.79	0.25	0.23	0.42	-0.02	0.54	-0.02	0.52

Notes: Mean values represent unadjusted statistics, while p-values in column 3 are from the coefficient on 'treatment' from a regression predicting each characteristic listed in the table among the group of attritors, while column 6 is the same among the panel sample. All regressions control for PAA × size fixed effects and standard errors are clustered at the community level.

Table B.3: Baseline balance of household dwelling indicators, by panel and attritor status

	ATTRITED			PANEL			DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	P-VALUE	CASH ONLY	CASH PLUS	P-VALUE	COL(1)-COL(4)	P-VALUE	COL(2)-COL(5)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Number of rooms	3.67	3.86	0.72	3.98	3.71	0.06	-0.31	0.02	0.15	0.84
Improved outer walls (mud/burnt bricks, cement)	0.57	0.59	0.66	0.68	0.69	0.98	-0.11	0.01	-0.10	0.09
Improved roof (iron/ plastic sheets, wood)	0.80	0.76	0.68	0.82	0.78	0.29	-0.02	0.64	-0.02	0.96
Improved floor (Concrete/flag stone/ cement, tile, wood)	0.15	0.15	0.98	0.22	0.13	0.01	-0.07	0.06	0.02	0.66
Water treatment	0.36	0.29	0.06	0.36	0.27	0.03	0.00	0.80	0.01	0.34
Improved toilet	0.05	0.01	0.08	0.03	0.01	0.05	0.02	0.42	-0.00	0.64
Household main source of fuel/energy for cooking: Firewood	0.97	0.98	0.82	0.99	0.99	0.97	-0.02	0.30	-0.01	0.36
Do you have electricity working in this dwelling?	0.14	0.15	0.92	0.19	0.14	0.07	-0.06	0.01	0.01	0.47
Dwelling's main lighting source: Torch (Battery powered/Rechargeable/ Solar)	0.51	0.57	0.37	0.47	0.55	0.05	0.04	0.46	0.02	0.94
Dwelling's main lighting source: Lanterns/ candles/paraffin	0.35	0.23	0.12	0.32	0.30	0.48	0.03	0.42	-0.07	0.47
Dwelling's main lighting source: Solar panel	0.08	0.08	0.80	0.13	0.09	0.14	-0.04	0.03	-0.00	0.36
Dwelling's main lighting source: Electricity via national grid	0.02	0.04	0.33	0.05	0.03	0.12	-0.03	0.00	0.01	0.51
Dwelling's main lighting source: Fire lit sticks, grass or pit	0.04	0.07	0.38	0.03	0.03	0.89	0.01	0.63	0.04	0.12
Walking distance to the nearest primary school (n. of minutes)	33.45	37.16	0.41	32.44	31.98	0.88	1.01	0.75	5.18	0.29
Walking distance to the nearest secondary school (n. of minutes)	76.90	81.34	0.68	78.80	80.70	0.61	-1.89	0.64	0.64	0.57
Walking distance to the nearest vocational school (n. of minutes)	81.62	126.08	0.02	83.62	97.36	0.25	-2.00	0.98	28.72	0.22

Notes: Mean values represent unadjusted statistics, while p-values in column 3 are from the coefficient on 'treatment' from a regression predicting each characteristic listed in the table among the group of attritors, while column 6 is the same among the panel sample. All regressions control for PAA × size fixed effects and standard errors are clustered at the community level.

Table B.4: Baseline balance of household economic indicators, by panel and attritor status

	ATTRITED			PANEL			DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	P-VALUE	CASH ONLY	CASH PLUS	P-VALUE	COL(1)-COL(4)	P-VALUE	COL(2)-COL(5)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Owned/cultivated any land (last rainy season)	0.95	0.98	0.12	0.97	0.98	0.26	-0.02	0.18	-0.00	0.74
Planted any crop (last rainy season)	1.00	0.99	0.29	0.98	0.99	0.52	0.02	0.00	0.01	0.61
Owned any livestock (last 12 months)	0.90	0.92	0.37	0.92	0.92	0.97	-0.02	0.60	0.01	0.63
Chicken	0.84	0.93	0.03	0.90	0.92	0.31	-0.06	0.08	0.02	0.69
Pig	0.38	0.39	0.87	0.42	0.35	0.11	-0.04	0.37	0.03	0.53
Cattle	0.18	0.16	0.85	0.21	0.20	0.64	-0.03	0.39	-0.04	0.94
Goat/sheep	0.08	0.08	0.74	0.14	0.13	0.53	-0.07	0.02	-0.04	0.07
Guinea pig	0.14	0.11	0.20	0.12	0.13	0.71	0.02	0.60	-0.01	0.21
Rabbit	0.02	0.03	0.28	0.04	0.03	0.27	-0.02	0.05	0.00	0.77
Duck	0.04	0.01	0.10	0.02	0.01	0.76	0.02	0.18	-0.01	0.31
Other animals	0.16	0.14	0.44	0.16	0.15	0.86	-0.00	0.93	-0.01	0.34
Total number of livestock	6.36	6.36	0.99	6.76	7.73	0.03	-0.39	0.46	-1.37	0.00
Operated any non-farm income-generating enterprise	0.26	0.18	0.12	0.24	0.24	0.88	0.03	0.43	-0.06	0.05

Notes: Mean values represent unadjusted statistics, while p-values in column 3 are from the coefficient on 'treatment' from a regression predicting each characteristic listed in the table among the group of attritors, while column 6 is the same among the panel sample. All regressions control for PAA × size fixed effects and standard errors are clustered at the community level.

Table B.5: Baseline balance of household wealth indicators, by panel and attritor status

	ATTRITED			PANEL			DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	P-VALUE	CASH ONLY	CASH PLUS	P-VALUE	COL(1)-COL(4)	P-VALUE	COL(2)-COL(5)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Mortar/pestle	0.66	0.69	0.69	0.66	0.66	0.89	-0.00	0.96	0.03	0.76
Bed	0.86	0.78	0.07	0.84	0.79	0.21	0.03	0.49	-0.02	0.48
Table	0.80	0.73	0.18	0.79	0.75	0.15	0.01	0.85	-0.01	0.45
Chair	0.95	0.87	0.02	0.94	0.92	0.31	0.02	0.52	-0.05	0.15
Radio (wireless)	0.24	0.22	0.81	0.28	0.24	0.12	-0.04	0.12	-0.01	0.52
Bicycle	0.10	0.13	0.70	0.17	0.18	0.43	-0.07	0.05	-0.05	0.01
Lantern (kerosene)	0.29	0.24	0.67	0.29	0.25	0.30	0.01	0.81	-0.02	0.55
Solar panel	0.09	0.08	0.47	0.12	0.09	0.17	-0.04	0.07	-0.01	0.18
Lamp (battery)	0.45	0.50	0.34	0.43	0.48	0.17	0.02	0.65	0.02	0.62

	ATTRITED			PANEL			DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	P-VALUE	CASH ONLY	CASH PLUS	P-VALUE	COL(1)-COL(4)	P-VALUE	COL(2)-COL(5)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Mosquito net	0.76	0.78	0.82	0.79	0.79	0.90	-0.04	0.41	-0.01	0.90
Regular mobile phone	0.53	0.52	0.97	0.63	0.56	0.05	-0.11	0.01	-0.04	0.30
Smart phone	0.01	0.02	0.26	0.02	0.01	0.41	-0.01	0.20	0.01	0.54
Wealth Index	-0.03	-0.13	0.27	0.13	-0.11	0.02	-0.16	0.00	-0.02	0.22
Lowest tertile	0.28	0.40	0.05	0.28	0.39	0.03	0.00	0.79	0.01	0.34
Middle tertile	0.35	0.31	0.60	0.33	0.33	0.96	0.02	0.68	-0.02	0.73
Highest tertile	0.36	0.29	0.14	0.39	0.28	0.01	-0.02	0.36	0.01	0.50

Notes: Mean values represent unadjusted statistics, while p-values in column 3 are from the coefficient on 'treatment' from a regression predicting each characteristic listed in the table among the group of attritors, while column 6 is the same among the panel sample. All regressions control for PAA × size fixed effects and standard errors are clustered at the community level.

Table B.6: Baseline balance of household saving and loan indicators, by panel and attritor status

	ATTRITED			PANEL			DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	P-VALUE	CASH ONLY	CASH PLUS	P-VALUE	COL(1)-COL(4)	P-VALUE	COL(2)-COL(5)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Any monetary savings	0.23	0.26	0.56	0.25	0.25	0.97	-0.02	0.53	0.01	0.93
How much does your household have in savings (TZS)	60,939.39	71,081.08	0.74	47,700.48	56,559.00	0.36	13,238.92	0.51	14,522.08	0.44
Applied for a loan, last 12 months	0.12	0.09	0.46	0.11	0.13	0.27	0.02	0.55	-0.04	0.34
Obtained the loan	0.94	0.92	0.49	0.95	0.99	0.13	-0.01	0.86	-0.07	0.34
If needed, could obtained a loan of 100,000 TZS within the next month	0.24	0.23	0.90	0.25	0.24	0.88	-0.01	0.79	-0.01	0.62

Notes: Mean values represent unadjusted statistics, while p-values in column 3 are from the coefficient on 'treatment' from a regression predicting each characteristic listed in the table among the group of attritors, while column 6 is the same among the panel sample. All regressions control for PAA × size fixed effects and standard errors are clustered at the community level.

Table B.7: Baseline balance of household safety net indicators, by panel and attritor status

	ATTRITED			PANEL			DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	P-VALUE	CASH ONLY	CASH PLUS	P-VALUE	COL(1)-COL(4)	P-VALUE	COL(2)-COL(5)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
PSSN livelihood grant	0.03	0.03	0.73	0.03	0.04	0.52	-0.00	0.97	-0.01	1.00
Cash transfers other than PSSN	0.01	0.00	0.31	0.01	0.00	0.39	-0.00	0.80	-0.00	0.05
Other transfers from households or individuals	0.11	0.05	0.06	0.07	0.07	0.84	0.05	0.11	-0.02	0.44
PSSN cash transfer (including payment for public works)	256,349.09	250,300.00	0.58	262,594.49	262,997.71	0.88	-6,245.40	0.34	-12,697.71	0.03
PSSN livelihood grant	138,500.00	93,375.00	0.00	101,695.65	81,524.14	0.06	36,804.35	0.00	11,850.86	0.05
Other transfers from households or individuals	83,058.82	61,428.57	0.57	68,553.57	66,254.72	0.93	14,505.25	0.67	-4,826.15	0.71

Notes: Mean values represent unadjusted statistics, while p-values in column 3 are from the coefficient on 'treatment' from a regression predicting each characteristic listed in the table among the group of attritors, while column 6 is the same among the panel sample. All regressions control for PAA × size fixed effects and standard errors are clustered at the community level.

Table B.8: Baseline balance of household shock indicators, by panel and attritor status

	ATTRITED			PANEL			DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	P-VALUE	CASH ONLY	CASH PLUS	P-VALUE	COL(1)-COL(4)	P-VALUE	COL(2)-COL(5)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Affected by any shock past 12 months	0.77	0.77	0.89	0.79	0.79	0.84	-0.02	0.56	-0.02	0.78
Unusually high prices for food	0.32	0.27	0.41	0.29	0.24	0.05	0.02	0.63	0.03	0.67
Serious illness or accident of household member(s)	0.27	0.18	0.11	0.19	0.23	0.15	0.08	0.04	-0.05	0.29
Drought/irregular rains	0.16	0.20	0.50	0.19	0.22	0.21	-0.03	0.41	-0.02	0.54
Unusually high level of livestock disease	0.06	0.06	0.89	0.10	0.12	0.53	-0.04	0.16	-0.05	0.04
Unusually high level of crop pests or disease	0.05	0.08	0.39	0.07	0.06	0.21	-0.02	0.36	0.03	0.36
Death of other household member(s)	0.04	0.05	0.46	0.03	0.03	1.00	0.01	0.78	0.02	0.30
Death of income earner(s)	0.04	0.03	0.71	0.03	0.03	0.92	0.01	0.72	0.00	0.86
Floods/landslides	0.00	0.03	0.05	0.01	0.02	0.70	-0.01	0.00	0.01	0.38
Unusually high costs of agricultural inputs	0.02	0.02	0.83	0.02	0.01	0.04	-0.00	0.65	0.01	0.50
Unusually low prices for agricultural output	0.00	0.02	0.15	0.02	0.01	0.58	-0.02	0.00	0.00	0.68
Theft of money/valuables/ assets/agricultural output	0.00	0.01	0.33	0.01	0.01	0.66	-0.01	0.01	-0.00	0.80
Birth in the household	0.01	0.02	0.54	0.01	0.00	0.25	0.00	0.87	0.02	0.23
Break-up of household	0.04	0.00	0.03	0.00	0.00	0.99	0.03	0.06	-0.00	0.09
Conflict/violence	0.01	0.00	0.30	0.01	0.01	0.80	0.00	0.91	-0.01	0.05

Notes: Mean values represent unadjusted statistics, while p-values in column 3 are from the coefficient on 'treatment' from a regression predicting each characteristic listed in the table among the group of attritors, while column 6 is the same among the panel sample. All regressions control for PAA × size fixed effects and standard errors are clustered at the community level.

Table B.9: Baseline balance of youth demographics, by panel and attritor status

	ATTRITED			PANEL			DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	P-VALUE	CASH ONLY	CASH PLUS	P-VALUE	COL(1)-COL(4)	P-VALUE	COL(2)-COL(5)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Female	0.48	0.55	0.12	0.48	0.43	0.02	-0.00	0.93	0.12	0.00
Age	16.01	16.25	0.09	16.15	16.06	0.24	-0.14	0.27	0.19	0.10
Child/adopted child	0.51	0.49	0.51	0.53	0.56	0.30	-0.02	0.64	-0.06	0.05
Grandchild	0.44	0.44	0.91	0.40	0.37	0.20	0.04	0.31	0.07	0.06
Other	0.03	0.07	0.10	0.06	0.06	0.84	-0.03	0.02	0.00	0.96
Head of household or wife/husband	0.02	0.01	0.18	0.01	0.01	0.15	0.01	0.12	-0.01	0.30

Notes: Mean values represent unadjusted statistics, while p-values in column 3 are from the coefficient on 'treatment' from a regression predicting each characteristic listed in the table among the group of attritors, while column 6 is the same among the panel sample. All regressions control for PAA × size fixed effects and standard errors are clustered at the community level.

Table B.10: Baseline balance of youth purchases indicators, by panel and attritor status

	ATTRITED			PANEL			DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	P-VALUE	CASH ONLY	CASH PLUS	P-VALUE	COL(1)-COL(4)	P-VALUE	COL(2)-COL(5)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Owns a cellphone	0.20	0.20	0.94	0.23	0.18	0.01	-0.03	0.35	0.02	0.62
Regular mobile phone	0.88	0.93	0.24	0.93	0.89	0.14	-0.05	0.26	0.04	0.53
Smart phone	0.12	0.07	0.24	0.07	0.11	0.14	0.05	0.26	-0.04	0.53
Purchased past 4 weeks: clothing or shoes	0.26	0.26	0.83	0.28	0.29	0.81	-0.02	0.44	-0.02	0.62
Purchased past 4 weeks: communication time (airtime/ data/phone/charging)	0.18	0.16	0.70	0.19	0.17	0.20	-0.02	0.61	-0.01	0.53
Purchased past 4 weeks: personal goods/hygiene items	0.33	0.37	0.32	0.40	0.33	0.03	-0.06	0.02	0.04	0.32
Purchased past 4 weeks: transportation (boda boda/ bus/bike repair)	0.09	0.13	0.13	0.12	0.11	0.48	-0.03	0.15	0.02	0.22
Purchased past 4 weeks: entertainment (sports/shows/ going out for food)	0.07	0.06	0.63	0.06	0.06	0.91	0.01	0.73	-0.01	0.68
Purchased past 4 weeks: any of the above items	0.46	0.47	0.79	0.52	0.48	0.26	-0.05	0.10	-0.02	0.75
Total amount spent past 4 weeks on the above items (TZS)	13,276.04	16,970.65	0.09	15,374.27	15,246.53	0.91	-2,098.23	0.20	1,724.12	0.47

Notes: Mean values represent unadjusted statistics, while p-values in column 3 are from the coefficient on 'treatment' from a regression predicting each characteristic listed in the table among the group of attritors, while column 6 is the same among the panel sample. All regressions control for PAA × size fixed effects and standard errors are clustered at the community level.

Table B.11: Baseline balance of youth risk aversion and patience, by panel and attritor status

	ATTRITED			PANEL			DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	P-VALUE	CASH ONLY	CASH PLUS	P-VALUE	COL(1)-COL(4)	P-VALUE	COL(2)-COL(5)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Game 1: 2,500 TZS if head, 2,500 TZS if tail	0.15	0.14	0.84	0.22	0.17	0.02	-0.06	0.03	-0.03	0.37
Game 2: 2,000 TZS if head, 4,000 TZS if tail	0.24	0.19	0.10	0.17	0.21	0.03	0.07	0.01	-0.02	0.39
Game 3: 1,500 TZS if head, 5,500 TZS if tail	0.21	0.30	0.06	0.22	0.18	0.06	-0.01	0.74	0.12	0.00
Game 4: 1,000 TZS if head, 7,000 TZS if tail	0.14	0.14	0.93	0.16	0.18	0.16	-0.01	0.69	-0.04	0.27
Game 5: 0 TZS if head, 10,000 TZS if tail	0.25	0.22	0.70	0.24	0.26	0.38	0.01	0.72	-0.04	0.37
Patience index	4.06	4.17	0.52	3.90	3.98	0.71	0.17	0.49	0.19	0.16
patience_index== 1.0000	0.28	0.33	0.57	0.35	0.30	0.20	-0.07	0.09	0.04	0.85
patience_index== 2.0000	0.05	0.01	0.09	0.04	0.04	0.96	0.01	0.68	-0.02	0.07
patience_index== 3.0000	0.05	0.01	0.15	0.04	0.05	0.37	0.02	0.55	-0.03	0.03
patience_index== 4.0000	0.16	0.09	0.07	0.09	0.14	0.03	0.07	0.04	-0.05	0.11
patience_index== 5.0000	0.12	0.12	0.93	0.13	0.15	0.36	-0.01	0.69	-0.02	0.52
patience_index== 6.0000	0.12	0.21	0.02	0.15	0.16	0.40	-0.02	0.49	0.05	0.23
patience_index== 7.0000	0.23	0.22	0.98	0.21	0.17	0.08	0.01	0.72	0.05	0.08

Notes: Mean values represent unadjusted statistics, while p-values in column 3 are from the coefficient on 'treatment' from a regression predicting each characteristic listed in the table among the group of attritors, while column 6 is the same among the panel sample. All regressions control for PAA × size fixed effects and standard errors are clustered at the community level.

Table B.12: Baseline balance of youth health, by panel and attritor status

	ATTRITED			PANEL			DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	P-VALUE	CASH ONLY	CASH PLUS	P-VALUE	COL(1)-COL(4)	P-VALUE	COL(2)-COL(5)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Can walk for 5 km easily	0.91	0.93	0.56	0.94	0.96	0.07	-0.02	0.30	-0.03	0.13
Can sweep the dwelling floor easily	0.97	0.98	0.35	0.98	0.98	0.94	-0.01	0.45	0.00	0.61
Self-rated health status: very good	0.40	0.38	0.59	0.35	0.40	0.13	0.05	0.16	-0.02	0.33
Self-rated health status: good	0.54	0.52	0.85	0.57	0.55	0.57	-0.03	0.47	-0.03	0.83
Self-rated health status: neutral	0.04	0.10	0.01	0.07	0.04	0.02	-0.03	0.07	0.06	0.01
Self-rated health status: bad or very bad	0.02	0.00	0.01	0.02	0.01	0.32	0.01	0.31	-0.01	0.00

Notes: Mean values represent unadjusted statistics, while p-values in column 3 are from the coefficient on 'treatment' from a regression predicting each characteristic listed in the table among the group of attritors, while column 6 is the same among the panel sample. All regressions control for PAA × size fixed effects and standard errors are clustered at the community level.

Table B.13: Baseline balance of youth education, by panel and attritor status

	ATTRITED			PANEL			DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	P-VALUE	CASH ONLY	CASH PLUS	P-VALUE	COL(1)-COL(4)	P-VALUE	COL(2)-COL(5)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Currently attending school	0.61	0.50	0.03	0.54	0.54	0.89	0.06	0.07	-0.04	0.22
Attends primary school	0.22	0.16	0.15	0.22	0.25	0.33	-0.01	0.79	-0.08	0.00
Attends secondary school	0.39	0.34	0.32	0.32	0.29	0.40	0.07	0.03	0.04	0.39
Highest grade completed: some primary	0.35	0.35	0.83	0.33	0.38	0.07	0.02	0.60	-0.04	0.43
Highest grade completed: Primary or higher	0.65	0.65	0.83	0.67	0.62	0.07	-0.02	0.60	0.04	0.43

Notes: Mean values represent unadjusted statistics, while p-values in column 3 are from the coefficient on 'treatment' from a regression predicting each characteristic listed in the table among the group of attritors, while column 6 is the same among the panel sample. All regressions control for PAA × size fixed effects and standard errors are clustered at the community level.

Table B.14: Baseline balance of youth participation in economic activities, by panel and attritor status

	ATTRITED			PANEL			DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	P-VALUE	CASH ONLY	CASH PLUS	P-VALUE	COL(1)-COL(4)	P-VALUE	COL(2)-COL(5)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Any economic activities	0.74	0.76	0.49	0.78	0.79	0.67	-0.04	0.21	-0.03	0.56
Farm work for the household, excluding livestock	0.62	0.68	0.24	0.65	0.67	0.61	-0.03	0.49	0.01	0.64
Livestock herding for the household	0.44	0.37	0.31	0.43	0.44	0.96	0.01	0.87	-0.07	0.18
Fishing for the household	0.01	0.01	0.97	0.01	0.02	0.77	-0.00	0.66	-0.01	0.47
Household business	0.05	0.04	0.81	0.06	0.05	0.34	-0.01	0.62	-0.00	0.91
Primary business owner/decision-maker	0.02	0.01	0.36	0.02	0.02	0.58	0.00	0.85	-0.01	0.28
Paid work outside the household	0.09	0.08	0.74	0.18	0.16	0.43	-0.09	0.00	-0.08	0.00
TASAF Public Works Programme	0.00	0.05	0.01	0.02	0.04	0.03	-0.01	0.18	0.01	0.66
Were you looking for a job in the past 7 days?	0.05	0.02	0.08	0.06	0.05	0.45	-0.02	0.20	-0.03	0.01

Notes: Mean values represent unadjusted statistics, while p-values in column 3 are from the coefficient on 'treatment' from a regression predicting each characteristic listed in the table among the group of attritors, while column 6 is the same among the panel sample. All regressions control for PAA × size fixed effects and standard errors are clustered at the community level.

Table B.15: Baseline balance of youth hours in economic activities, by panel and attritor status

	ATTRITED			PANEL			DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	P-VALUE	CASH ONLY	CASH PLUS	P-VALUE	COL(1)-COL(4)	P-VALUE	COL(2)-COL(5)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Hours in any economic activities	11.93	12.65	0.48	13.98	13.93	0.93	-2.04	0.09	-1.28	0.43
Hours in farm work for the household, excluding livestock	7.06	8.18	0.23	8.09	8.16	0.93	-1.04	0.19	0.02	0.95
Hours in livestock herding for the household	2.99	2.39	0.60	3.02	3.03	0.89	-0.03	0.97	-0.64	0.26
Hours in fishing for the household	0.05	0.03	0.63	0.04	0.09	0.34	0.01	0.89	-0.06	0.21
Hours in household business	0.76	0.31	0.19	0.75	0.68	0.81	0.01	0.98	-0.37	0.16
Business sales past 4 weeks (000 TZS)	1.00	1.98	0.56	1.28	1.98	0.50	-0.27	0.76	-0.00	0.93
Business profit or loss past 4 weeks (000 TZS)	0.50	0.46	0.97	0.37	0.24	0.68	0.14	0.70	0.21	0.67
Hours in paid work outside the household	1.07	1.45	0.59	2.02	1.80	0.58	-0.96	0.00	-0.35	0.55
Hours in TASAF Public Works Program	0.01	0.29	0.01	0.05	0.16	0.03	-0.04	0.07	0.13	0.30

Notes: Mean values represent unadjusted statistics, while p-values in column 3 are from the coefficient on 'treatment' from a regression predicting each characteristic listed in the table among the group of attritors, while column 6 is the same among the panel sample. All regressions control for PAA × size fixed effects and standard errors are clustered at the community level.

Table B.16: Baseline balance of youth participation in household chores, by panel and attritor status

	ATTRITED			PANEL			DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	P-VALUE	CASH ONLY	CASH PLUS	P-VALUE	COL(1)-COL(4)	P-VALUE	COL(2)-COL(5)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Any chores	0.89	0.91	0.47	0.91	0.87	0.06	-0.02	0.54	0.04	0.10
Collecting water	0.61	0.68	0.23	0.66	0.65	0.79	-0.05	0.21	0.02	0.65
Collecting firewoods	0.34	0.48	0.03	0.33	0.36	0.36	0.01	0.88	0.12	0.00
Collecting nuts	0.10	0.09	0.74	0.09	0.12	0.13	0.01	0.73	-0.03	0.25
Taking care of children, cooking or cleaning	0.73	0.76	0.49	0.75	0.69	0.03	-0.02	0.61	0.07	0.07
Taking care of elderly or sick	0.30	0.23	0.16	0.21	0.23	0.63	0.09	0.02	0.01	0.75

Notes: Mean values represent unadjusted statistics, while p-values in column 3 are from the coefficient on 'treatment' from a regression predicting each characteristic listed in the table among the group of attritors, while column 6 is the same among the panel sample. All regressions control for PAA × size fixed effects and standard errors are clustered at the community level.

Table B.17: Baseline balance of youth time use/hours in household chores, by panel and attritor status

	ATTRITED			PANEL			DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	P-VALUE	CASH ONLY	CASH PLUS	P-VALUE	COL(1)-COL(4)	P-VALUE	COL(2)-COL(5)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Hours in any chores	3.19	3.37	0.48	3.01	3.01	0.99	0.18	0.39	0.36	0.12
Hours in collecting water	0.76	0.71	0.63	0.76	0.70	0.30	0.01	0.93	0.01	0.82
Hours in collecting firewoods	0.46	0.61	0.09	0.49	0.51	0.69	-0.04	0.55	0.10	0.13
Hours in collecting nuts	0.14	0.10	0.38	0.12	0.17	0.06	0.02	0.56	-0.07	0.05
Hours in taking care of children, cooking or cleaning	1.37	1.45	0.48	1.33	1.23	0.16	0.04	0.71	0.21	0.07
Hours in taking care of elderly or sick	0.46	0.50	0.72	0.31	0.40	0.10	0.15	0.05	0.10	0.35

Notes: Mean values represent unadjusted statistics, while p-values in column 3 are from the coefficient on 'treatment' from a regression predicting each characteristic listed in the table among the group of attritors, while column 6 is the same among the panel sample. All regressions control for PAA × size fixed effects and standard errors are clustered at the community level.

Table B.18: Attrition of mental health indicators at baseline

	ATTRITED			PANEL			DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	P-VALUE	CASH ONLY	CASH PLUS	P-VALUE	COL(1)-COL(4)	P-VALUE	COL(2)-COL(5)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Reports depressive symptoms (CES-D10>=10)	0.30	0.27	0.46	0.28	0.30	0.35	0.02	0.49	-0.03	0.24
ELDI (0-39)	4.06	3.50	0.42	3.57	3.39	0.41	0.49	0.23	0.11	0.58
Well-being	3.29	2.89	0.38	3.03	2.78	0.18	0.26	0.33	0.11	0.53
Risk	0.38	0.22	0.25	0.24	0.27	0.53	0.14	0.18	-0.05	0.70
Relations	0.39	0.39	0.80	0.30	0.33	0.64	0.09	0.40	0.06	0.35

Notes: Mean values represent unadjusted statistics, while p-values in column 3 are from the coefficient on 'treatment' from a regression predicting each characteristic listed in the table among the group of attritors, while column 6 is the same among the panel sample. All regressions control for PAA × size fixed effects and standard errors are clustered at the community level.

Table B.19: Attrition of aspirations indicators at baseline

	ATTRITED			PANEL			DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	P-VALUE	CASH ONLY	CASH PLUS	P-VALUE	COL(1)-COL(4)	P-VALUE	COL(2)-COL(5)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Ideal level of education: None	0.01	0.03	0.38	0.03	0.03	0.47	-0.01	0.16	-0.01	0.66
Ideal level of education: Some primary or primary	0.03	0.07	0.13	0.03	0.04	0.57	0.00	0.88	0.03	0.15
Ideal level of education: Some secondary	0.29	0.29	0.85	0.29	0.29	0.89	0.00	0.97	0.00	0.81
Ideal level of education: Vocational	0.02	0.01	0.14	0.01	0.02	0.42	0.01	0.28	-0.01	0.27
Ideal level of education: Some tertiary	0.63	0.61	0.71	0.64	0.62	0.63	-0.00	0.98	-0.01	0.89
Ideal occupation: Teacher	0.31	0.44	0.01	0.42	0.41	0.72	-0.10	0.00	0.04	0.39
Ideal occupation: Doctor/Health care professional	0.22	0.23	0.63	0.23	0.24	0.71	-0.01	0.77	-0.01	0.93
Ideal occupation: Government/ parastatal	0.09	0.05	0.10	0.05	0.05	0.69	0.04	0.03	-0.00	0.84
Ideal occupation: Business ownwer	0.07	0.04	0.09	0.04	0.03	0.12	0.03	0.11	0.01	0.60
Ideal occupation: Other	0.31	0.25	0.12	0.26	0.27	0.60	0.05	0.17	-0.02	0.36

Notes: Mean values represent unadjusted statistics, while p-values in column 3 are from the coefficient on 'treatment' from a regression predicting each characteristic listed in the table among the group of attritors, while column 6 is the same among the panel sample. All regressions control for PAA × size fixed effects and standard errors are clustered at the community level.

Table B.20: Attrition of youth support and attitudes indicators at baseline

	ATTRITED			PANEL			DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	P-VALUE	CASH ONLY	CASH PLUS	P-VALUE	COL(1)-COL(4)	P-VALUE	COL(2)-COL(5)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Please tell me which of the two propositions you mostly agree with: 1. Each pers	0.64	0.65	0.94	0.64	0.63	0.90	0.00	0.87	0.02	0.70
Locus of control index	3.13	3.17	0.35	3.20	3.21	0.96	-0.07	0.06	-0.03	0.50
Social support index	3.95	3.94	0.87	3.99	4.03	0.25	-0.04	0.45	-0.09	0.04
Quality of life ladder: 1 (Worst) to 10 (Best)	3.61	3.56	0.94	3.72	3.85	0.58	-0.12	0.53	-0.29	0.18
Self-esteem index	3.90	3.90	0.81	3.93	3.95	0.57	-0.03	0.62	-0.05	0.14

Notes: Mean values represent unadjusted statistics, while p-values in column 3 are from the coefficient on 'treatment' from a regression predicting each characteristic listed in the table among the group of attritors, while column 6 is the same among the panel sample. All regressions control for PAA × size fixed effects and standard errors are clustered at the community level.

Table B.21: Attrition of attitudes on gender indicators at baseline

	ATTRITED			PANEL			DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	P-VALUE	CASH ONLY	CASH PLUS	P-VALUE	COL(1)-COL(4)	P-VALUE	COL(2)-COL(5)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
GEM scale (0-24)	11.58	12.39	0.40	13.02	12.19	0.07	-1.43	0.01	0.19	0.88
Violence sub-scale (0-6)	3.61	3.78	0.58	3.80	3.63	0.19	-0.19	0.18	0.16	0.48
Reproductive health sub-scale (0-5)	2.49	2.67	0.34	2.82	2.71	0.25	-0.33	0.01	-0.03	0.71
Sexuality sub-scale (0-8)	4.10	4.30	0.47	4.44	4.26	0.23	-0.34	0.12	0.05	0.86
Domestic chores and daily life sub-scale (0-5)	1.53	1.61	0.78	1.81	1.65	0.22	-0.28	0.02	-0.04	0.49

Notes: Mean values represent unadjusted statistics, while p-values in column 3 are from the coefficient on 'treatment' from a regression predicting each characteristic listed in the table among the group of attritors, while column 6 is the same among the panel sample. All regressions control for PAA × size fixed effects and standard errors are clustered at the community level.

Table B.22: Attrition of partner/relationship indicators at baseline

	ATTRITED			PANEL			DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	P-VALUE	CASH ONLY	CASH PLUS	P-VALUE	COL(1)-COL(4)	P-VALUE	COL(2)-COL(5)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Ever had spouse/cohabiting partner	0.01	0.02	0.86	0.02	0.01	0.01	-0.00	0.78	0.01	0.22
Single/never married	0.99	0.98	0.86	0.98	0.99	0.01	0.00	0.78	-0.01	0.22
Has a girlfriend or boyfriend	0.15	0.17	0.43	0.19	0.16	0.11	-0.04	0.11	0.01	0.52
N	191	163		1081	1023					

Notes: Mean values represent unadjusted statistics, while p-values in column 3 are from the coefficient on 'treatment' from a regression predicting each characteristic listed in the table among the group of attritors, while column 6 is the same among the panel sample. All regressions control for PAA × size fixed effects and standard errors are clustered at the community level.

Table B.23: Attrition of first sex indicators at baseline

	ATTRITED			PANEL			DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	P-VALUE	CASH ONLY	CASH PLUS	P-VALUE	COL(1)-COL(4)	P-VALUE	COL(2)-COL(5)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Ever had sex	0.17	0.19	0.40	0.17	0.16	0.53	-0.00	0.98	0.03	0.30
Age at first sexual intercourse	16.03	16.05	0.73	15.88	15.81	0.86	0.15	0.20	0.25	0.42
First sex forced/pressured/tricked - among sexually debuted	0.19	0.16	0.82	0.16	0.13	0.26	0.03	0.63	0.03	0.61

Notes: Mean values represent unadjusted statistics, while p-values in column 3 are from the coefficient on 'treatment' from a regression predicting each characteristic listed in the table among the group of attritors, while column 6 is the same among the panel sample. All regressions control for PAA × size fixed effects and standard errors are clustered at the community level.

Table B.24: Attrition of recent sex indicators at baseline

	ATTRITED			PANEL			DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	P-VALUE	CASH ONLY	CASH PLUS	P-VALUE	COL(1)-COL(4)	P-VALUE	COL(2)-COL(5)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Number of sexual partners in last 12 months	0.19	0.22	0.44	0.21	0.18	0.29	-0.02	0.69	0.04	0.29
Among ever had sex: has had concurrent sexual relationships in last 12 months	0.01	0.01	0.36	0.01	0.01	0.44	0.01	0.53	-0.01	0.34
Last sex: used condom	0.59	0.41	0.19	0.49	0.62	0.03	0.11	0.39	-0.21	0.04
Last sex: partner 5 or more years older	0.01	0.03	0.44	0.03	0.02	0.12	-0.02	0.07	0.01	0.69
Last sex: partner 10 or more years older	0.00	0.01	0.31	0.00	0.00	0.90	-0.00	0.17	0.00	0.74

Notes: Mean values represent unadjusted statistics, while p-values in column 3 are from the coefficient on 'treatment' from a regression predicting each characteristic listed in the table among the group of attritors, while column 6 is the same among the panel sample. All regressions control for PAA × size fixed effects and standard errors are clustered at the community level.

Table B.25: Attrition of contraceptive knowledge/use at baseline

	ATTRITED			PANEL			DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	P-VALUE	CASH ONLY	CASH PLUS	P-VALUE	COL(1)-COL(4)	P-VALUE	COL(2)-COL(5)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Has knowledge about contraceptives	0.73	0.75	0.70	0.80	0.75	0.13	-0.07	0.06	-0.01	0.71
Has knowledge about modern contraceptives	0.71	0.70	0.89	0.75	0.71	0.20	-0.04	0.24	-0.01	0.68
Currently using contraceptive	0.47	0.45	0.78	0.54	0.61	0.24	-0.06	0.52	-0.16	0.11
Currently using modern contraceptive	0.47	0.45	0.78	0.51	0.60	0.16	-0.04	0.66	-0.15	0.14

Notes: Mean values represent unadjusted statistics, while p-values in column 3 are from the coefficient on 'treatment' from a regression predicting each characteristic listed in the table among the group of attritors, while column 6 is the same among the panel sample. All regressions control for PAA × size fixed effects and standard errors are clustered at the community level.

Table B.26: Attrition of fertility indicators at baseline

	ATTRITED			PANEL			DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	P-VALUE	CASH ONLY	CASH PLUS	P-VALUE	COL(1)-COL(4)	P-VALUE	COL(2)-COL(5)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Ever pregnant	0.10	0.14	0.30	0.12	0.11	0.59	-0.02	0.61	0.03	0.27
Currently pregnant	0.02	0.04	0.36	0.03	0.02	0.72	-0.01	0.68	0.01	0.55
Males: ever got female pregnant	0.00	0.00		0.01	0.00	0.39	-0.01	0.04	-0.00	0.17

Notes: Mean values represent unadjusted statistics, while p-values in column 3 are from the coefficient on 'treatment' from a regression predicting each characteristic listed in the table among the group of attritors, while column 6 is the same among the panel sample. All regressions control for PAA × size fixed effects and standard errors are clustered at the community level.

Table B.27: Attrition of transactional sex indicators at baseline

	ATTRITED			PANEL			DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	P-VALUE	CASH ONLY	CASH PLUS	P-VALUE	COL(1)-COL(4)	P-VALUE	COL(2)-COL(5)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Transactional sex index, females	0.12	0.19	0.25	0.18	0.20	0.61	-0.06	0.36	-0.02	0.83
Provided money, favours, or gifts for sex last 12 months	0.00	0.01	0.89	0.00	0.01	0.48	0.00	0.98	-0.00	0.92
N	37	40		184	159					

Notes: Mean values represent unadjusted statistics, while p-values in column 3 are from the coefficient on 'treatment' from a regression predicting each characteristic listed in the table among the group of attritors, while column 6 is the same among the panel sample. All regressions control for PAA × size fixed effects and standard errors are clustered at the community level.

Table B.28: Attrition of HIV risk indicators at baseline

	ATTRITED			PANEL			DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	P-VALUE	CASH ONLY	CASH PLUS	P-VALUE	COL(1)-COL(4)	P-VALUE	COL(2)-COL(5)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Perceived HIV risk: moderate/high	0.05	0.03	0.29	0.03	0.02	0.43	0.02	0.21	0.01	0.64
Perceived HIV risk: low	0.10	0.10	0.84	0.13	0.13	0.83	-0.04	0.17	-0.03	0.51
Perceived HIV risk: none	0.85	0.87	0.64	0.83	0.85	0.64	0.01	0.72	0.02	0.72
Tested for HIV: Lifetime	0.40	0.45	0.28	0.43	0.45	0.56	-0.04	0.17	-0.00	0.74
Tested for HIV: 12 months	0.23	0.31	0.05	0.29	0.30	0.78	-0.06	0.02	0.01	0.84
Received HIV test results: 12 months	0.52	0.68	0.03	0.64	0.65	0.86	-0.12	0.04	0.03	0.51

Notes: Mean values represent unadjusted statistics, while p-values in column 3 are from the coefficient on 'treatment' from a regression predicting each characteristic listed in the table among the group of attritors, while column 6 is the same among the panel sample. All regressions control for PAA × size fixed effects and standard errors are clustered at the community level.

Table B.29: Attrition of HIV knowledge indicators at baseline

	ATTRITED			PANEL			DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	P-VALUE	CASH ONLY	CASH PLUS	P-VALUE	COL(1)-COL(4)	P-VALUE	COL(2)-COL(5)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Knows that a good-looking person can have HIV	0.83	0.83	0.85	0.82	0.79	0.24	0.01	0.67	0.03	0.28
Knows that a mother can trasmit HIV to her child	0.69	0.66	0.52	0.71	0.67	0.17	-0.02	0.56	-0.01	0.31
Knows there are medicines that help an HIV positive person to live longer	0.86	0.90	0.33	0.88	0.88	0.66	-0.02	0.53	0.02	0.35

Notes: Mean values represent unadjusted statistics, while p-values in column 3 are from the coefficient on 'treatment' from a regression predicting each characteristic listed in the table among the group of attritors, while column 6 is the same among the panel sample. All regressions control for PAA × size fixed effects and standard errors are clustered at the community level.

Table B.30: Attrition of experiences of violence at baseline

	ATTRITED			PANEL			DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	P-VALUE	CASH ONLY	CASH PLUS	P-VALUE	COL(1)-COL(4)	P-VALUE	COL(2)-COL(5)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Experienced emotional abuse	0.38	0.42	0.43	0.39	0.31	0.02	-0.01	0.83	0.11	0.06
Experienced physical violence	0.31	0.24	0.37	0.28	0.24	0.21	0.03	0.39	-0.00	0.93
Experienced emotional or physical violence	0.53	0.49	0.85	0.47	0.40	0.07	0.07	0.23	0.09	0.09
Experienced emotional IPV	0.11	0.07	0.25	0.10	0.09	0.80	0.02	0.63	-0.03	0.34
Experienced physical IPV	0.09	0.03	0.14	0.08	0.06	0.55	0.02	0.69	-0.03	0.10
Experienced emotional or physical IPV	0.18	0.08	0.06	0.13	0.12	0.81	0.05	0.27	-0.04	0.14
N	102	75		509	479					

Notes: Mean values represent unadjusted statistics, while p-values in column 3 are from the coefficient on 'treatment' from a regression predicting each characteristic listed in the table among the group of attritors, while column 6 is the same among the panel sample. All regressions control for PAA × size fixed effects and standard errors are clustered at the community level.

Table B.31: Round 3 balance of youth outcomes, by panel and attritor status (main outcomes)

	ATTRITED BETWEEN R3 & R4		INTERVIEWED IN R3 & R4		DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	CASH ONLY	CASH PLUS	COL(1)-COL(3)	P-VALUE	COL(2)-COL(4)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Currently attending school	0.37	0.28	0.35	0.32	0.03	0.43	-0.04	0.28
Any economic activities	0.75	0.76	0.81	0.83	-0.06	0.15	-0.07	0.05
Livestock herding for the household	0.43	0.39	0.48	0.57	-0.06	0.14	-0.18	0.00
Any chores	0.86	0.91	0.89	0.88	-0.04	0.31	0.03	0.36
Currently doing business	0.06	0.22	0.11	0.27	-0.05	0.04	-0.05	0.35
Self-esteem index	3.90	3.97	3.75	3.85	0.15	0.05	0.12	0.08
Locus of control index	3.30	3.31	3.29	3.29	0.01	0.79	0.02	0.73
Reports depressive symptoms (CES-D10>=10)	0.25	0.22	0.27	0.20	-0.02	0.52	0.02	0.57
GEM scale (0-24)	12.65	13.44	12.81	13.02	-0.16	0.89	0.42	0.69
Violence sub-scale (0-6)	3.52	3.72	3.55	3.63	-0.03	0.88	0.09	0.94
Reproductive health sub-scale (0-5)	2.73	2.81	2.81	2.82	-0.08	0.54	-0.01	0.79
Sexuality sub-scale (0-8)	4.63	4.80	4.83	4.85	-0.21	0.34	-0.04	0.51
Domestic chores and daily life sub-scale (0-5)	1.72	1.90	1.64	1.86	0.08	0.46	0.04	0.83
Knows that sex with one uninfected monogomous partner can reduce risk of HIV	0.68	0.65	0.62	0.67	0.06	0.08	-0.01	0.70
Knows mosquitos do not transfer HIV	0.85	0.86	0.88	0.86	-0.03	0.41	-0.00	0.93
Knows regular condom use reduces HIV risk	0.74	0.74	0.69	0.75	0.06	0.10	-0.00	0.76
Knows HIV is not transfered through food	0.94	0.94	0.94	0.93	0.00	0.96	0.02	0.26

	ATTRITED BETWEEN R3 & R4		INTERVIEWED IN R3 & R4		DIFFERENCE		DIFFERENCE	
	CASH ONLY	CASH PLUS	CASH ONLY	CASH PLUS	COL(1)-COL(3)	P-VALUE	COL(2)-COL(4)	P-VALUE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Knows that a good-looking person can have HIV	0.72	0.76	0.76	0.79	-0.04	0.26	-0.03	0.44
Knows that a mother can trasmit HIV to her child	0.65	0.67	0.68	0.67	-0.03	0.54	0.01	0.95
Knows there are medicines that help an HIV positive person to live longer	0.89	0.86	0.91	0.91	-0.01	0.66	-0.05	0.18
Has knowledge about contraceptives	0.92	0.93	0.92	0.95	-0.00	0.99	-0.02	0.32
Has knowledge about modern contraceptives	0.87	0.91	0.90	0.94	-0.03	0.32	-0.03	0.18
Currently using contraceptive - among sexually debuted	0.56	0.64	0.63	0.62	-0.08	0.25	0.02	0.84
Currently using modern contraceptive - among sexually debuted	0.54	0.61	0.62	0.61	-0.08	0.20	-0.00	0.95
Tested for HIV: Lifetime	0.58	0.67	0.62	0.66	-0.04	0.33	0.00	0.99
Tested for HIV: 12 months	0.42	0.47	0.43	0.49	-0.01	0.89	-0.02	0.62
Visited health facility for SRH services - lifetime	0.21	0.29	0.27	0.26	-0.06	0.04	0.02	0.55
Visited health facility for SRH services - past 12 months	0.17	0.26	0.22	0.23	-0.05	0.06	0.03	0.47
Ever had sex	0.34	0.35	0.38	0.35	-0.04	0.41	-0.00	0.82
Provided money, favours, or gifts for sex last 12 months	0.12	0.24	0.16	0.19	-0.05	0.54	0.04	0.64
ts_mean	0.38	0.35	0.37	0.45	0.01	0.94	-0.10	0.07
Experienced emotional abuse	0.39	0.39	0.35	0.28	0.04	0.49	0.11	0.09
Experienced physical violence	0.16	0.11	0.12	0.11	0.04	0.39	0.00	0.81
Experienced emotional or physical violence	0.43	0.42	0.38	0.33	0.05	0.39	0.10	0.11
Experienced emotional IPV	0.12	0.17	0.11	0.08	0.01	0.81	0.09	0.05
Experienced physical IPV	0.07	0.04	0.04	0.03	0.03	0.32	0.01	0.42
Experienced emotional or physical IPV	0.16	0.18	0.13	0.09	0.03	0.47	0.09	0.04
Perpetrated emotional abuse	0.07	0.07	0.07	0.05	-0.00	0.93	0.02	0.48
Perpetrated physical violence	0.14	0.04	0.06	0.04	0.08	0.06	0.01	0.81
Experienced emotional/physical/sexual violence	0.47	0.44	0.40	0.33	0.07	0.22	0.11	0.07
Experienced sexual violence	0.08	0.01	0.06	0.02	0.02	0.38	-0.01	0.62
Experienced sexual violence - lifetime	0.11	0.10	0.07	0.05	0.03	0.31	0.05	0.27
Experienced emotional/physical/sexual violence	0.47	0.44	0.40	0.33	0.07	0.22	0.11	0.07
Forced first sex intercourse	0.06	0.07	0.06	0.05	0.01	0.85	0.02	0.36

Notes: Outcomes are measured at Round 3. Mean values represent unadjusted statistics, while p-values in column 5 are from the coefficient on 'attrited' from a regression predicting each characteristic listed in the table among the control group, while column 8 is the same among the treatment sample. All regressions control for PAA × size fixed effects and standard errors are clustered at the community level.

Appendix C. Cash-plus impacts by Gender

Chapter 7

Table C.7.1: Cash-plus impacts on schooling, by gender

	FEMALES				MALES			
	ITT IMPACT	BASELINE MEAN	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN	ITT IMPACT	BASELINE MEAN	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Currently attending school	-0.002	0.610	0.161	0.154	-0.022	0.487	0.153	0.138
	(0.02)				(0.02)			
Attending primary school	0.004	0.243	0.004	0.007	0.001	0.229	0.004	0.005
	(0.01)				(0.00)			
Attending secondary school	-0.011	0.367	0.157	0.147	-0.012	0.258	0.150	0.132
	(0.02)				(0.02)			
Highest grade of education completed	-0.039	7.088	8.937	8.660	0.055	6.560	8.166	7.887
	(0.16)				(0.25)			
N	930	930	509	421	1,122	1,122	555	567
Dropped out from primary school	0.013		0.038	0.053	-0.014		0.056	0.040
	(0.03)				(0.03)			
N	226		131	95	257		108	149
Dropped out from secondary school	0.056		0.151	0.206	0.050		0.162	0.215
	(0.04)				(0.05)			
N	341		186	155	289		154	135

Notes: Linear models were estimated on the panel of youth interviewed both at baseline and Round 4, separately for male and female. Regressions for school attendance and highest grade completed control for gender, age and outcome value at baseline, PAA × size fixed effects. Dropout of primary is measured at Round 4, for youth who were attending primary school at baseline (N female=226; N male=257). Dropout of secondary is measured at Round 4, for youth who were attending secondary school at baseline (N female=341; N male=289). Regressions for dropout only control for gender, age at baseline and PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p<0.05, **p<0.01.

Table C.7.2: Cash-plus impacts on business, by gender (single difference)

	FEMALES			MALES		
	ITT IMPACT	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN	ITT IMPACT	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)	(6)
Currently doing business	0.095**	0.073	0.166	0.044	0.081	0.127
	(0.02)			(0.02)		
Owns any assets used for the business	0.019	0.014	0.033	0.027*	0.023	0.051
	(0.01)			(0.01)		
Owns livestock	0.034**	0.000	0.033	0.029**	0.007	0.037
	(0.01)			(0.01)		
Total sales/revenues last operating month (000 TZS)	4.270	4.485	8.869	7.437	11.016	18.440
	(2.30)			(5.15)		
Total profit or loss last operating month (000 TZS)	2.331**	1.109	3.350	4.015	4.277	8.257
	(0.78)			(2.12)		
N	930	509	421	1,123	555	568

Notes: Linear models were estimated on the separate subsamples of female and male youth interviewed both at baseline and Round 4. Regressions control for gender, age at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p<0.05, **p<0.01.

Table C.7.3: Cash-plus impacts on participation in economic activities, by gender (ANCOVA)

	FEMALES				MALES			
	ITT IMPACT	BASELINE MEAN	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN	ITT IMPACT	BASELINE MEAN	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Any economic activities	0.068*	0.696	0.741	0.808	0.009	0.857	0.793	0.803
	(0.03)				(0.03)			
Farm work for the household, excluding livestock	0.090*	0.583	0.574	0.667	0.022	0.719	0.568	0.593
	(0.04)				(0.03)			
Livestock herding for the household	0.134**	0.344	0.371	0.499	0.034	0.508	0.393	0.433
	(0.04)				(0.03)			
Fishing for the household	0.010	0.008	0.020	0.029	0.010	0.020	0.011	0.021
	(0.01)				(0.01)			
Household business	-0.016	0.052	0.204	0.185	0.034	0.051	0.216	0.252
	(0.03)				(0.03)			
Paid work outside the household	0.020	0.088	0.206	0.233	-0.007	0.240	0.326	0.313
	(0.03)				(0.04)			
TASAF Public Works Program	0.033*	0.015	0.018	0.048	0.011	0.033	0.011	0.023
	(0.01)				(0.01)			
Were you looking for a job in the past 7 days?	-0.068**	0.046	0.126	0.060	-0.024	0.071	0.106	0.081
	(0.02)				(0.02)			
N	929	929	509	420	1,122	1,122	555	567

Notes: Linear models were estimated on the separate subsamples of female and male youth interviewed both at baseline and Round 4. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p<0.05, **p<0.01.

Table C.7.4: Cash-plus impacts on hours in economic activities, by gender (ANCOVA)

	FEMALES				MALES			
	ITT IMPACT	BASELINE MEAN	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN	ITT IMPACT	BASELINE MEAN	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Hours in any economic activities	4.212**	9.713	16.978	21.504	1.081	17.467	29.656	30.673
	(1.39)				(1.99)			
Hours in farm work for the household, excluding livestock	3.012**	6.981	8.305	11.523	0.942	9.075	12.856	13.754
	(0.95)				(1.18)			
Hours in livestock herding for the household	0.907**	1.274	1.711	2.622	0.308	4.472	3.908	4.283
	(0.28)				(0.57)			
Hours in fishing for the household	0.001	0.069	0.073	0.069	0.022	0.065	0.072	0.095
	(0.04)				(0.05)			
Hours in household business	0.738	0.541	2.442	3.100	0.451	0.866	3.314	3.799
	(0.64)				(0.72)			
Hours in paid work outside the household	-0.391	0.774	4.422	4.121	-0.723	2.862	9.407	8.452
	(0.80)				(1.26)			
Daily amount received for last payment in paid job (000 TZS)	0.563	0.749	1.549	2.182	1.013	2.702	3.233	4.272
	(0.44)				(1.08)			
Hours in TASAF Public Works Program	0.047*	0.074	0.026	0.069	0.186	0.127	0.099	0.289
	(0.02)				(0.13)			
N	929	929	509	420	1,123	1,123	555	568

Notes: Linear models were estimated on the separate subsamples of female and male youth interviewed both at baseline and Round 4. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p<0.05, **p<0.01.

Table C.7.5: Cash-plus Impacts on work-related hazards, by gender (single difference)

	FEMALES			MALES		
	ITT IMPACT	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN	ITT IMPACT	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)	(6)
Exposed to work-related hazards	0.089*	0.479	0.565	0.050	0.472	0.521
	(0.04)			(0.04)		
Carrying heavy loads	0.027	0.143	0.171	0.034	0.249	0.282
	(0.03)			(0.03)		
Working with dangerous tools	-0.009	0.130	0.119	0.021	0.272	0.294
	(0.02)			(0.04)		
Exposure to dusts, fumes or gases	0.030	0.206	0.240	0.062*	0.186	0.246
	(0.03)			(0.03)		
Exposed to extreme cold, heat or humidity	0.054	0.371	0.425	0.077*	0.279	0.354
	(0.04)			(0.04)		
Exposed to loud noise or vibrations	0.048	0.088	0.135	0.028	0.108	0.134
	(0.03)			(0.02)		
Working at water bodies (sea, lakes, rivers)	-0.014	0.063	0.048	0.033*	0.027	0.060
	(0.02)			(0.01)		
Working at night (08:00pm-05:59am)	0.011	0.077	0.086	-0.003	0.034	0.030
	(0.02)			(0.01)		
Working in bars, hotels or places of entertainment	-0.006	0.043	0.038	0.008	0.029	0.037
	(0.01)			(0.01)		
Ever hurt or suffered from illness	-0.012	0.059	0.048	0.055*	0.094	0.150
	(0.02)			(0.03)		
Number of days of main activity missed due to injury	-0.100	0.318	0.216	0.181	0.968	1.134
	(0.13)			(0.34)		
N	930	509	421	1,123	555	568

Notes: Linear models were estimated on the separate subsamples of female and male youth interviewed both at baseline and Round 4. Regressions control for gender, age, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p<0.05, **p<0.01.

Table C.7.6: Cash-plus impacts on participation in household chores, by gender (ANCOVA)

	FEMALES				MALES			
	ITT IMPACT	BASELINE MEAN	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN	ITT IMPACT	BASELINE MEAN	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Collecting water	0.006	0.727	0.713	0.722	-0.007	0.602	0.562	0.558
	(0.03)				(0.03)			
Collecting firewood	0.085*	0.378	0.375	0.461	-0.009	0.316	0.350	0.343
	(0.04)				(0.04)			
Collecting nuts	0.046	0.130	0.153	0.197	-0.008	0.085	0.070	0.062
	(0.03)				(0.02)			
Taking care of children, cooking or cleaning	-0.013	0.897	0.916	0.900	0.068	0.571	0.317	0.380
	(0.02)				(0.04)			
Taking care of elderly or sick	0.091**	0.265	0.206	0.292	0.049	0.183	0.117	0.167
	(0.03)				(0.03)			
Any chores	-0.007	0.967	0.967	0.960	0.027	0.823	0.705	0.731
	(0.01)				(0.03)			
Participated in work or chores last week	-0.009	0.976	0.976	0.967	-0.000	0.956	0.910	0.910
	(0.01)				(0.02)			
N	930	930	509	421	1,123	1,123	555	568

Notes: Linear models were estimated on the separate subsamples of female and male youth interviewed both at baseline and Round 4. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p<0.05, **p<0.01.

Table C.7.7: Cash-plus impacts on hours in household chores, by gender (ANCOVA)

	FEMALES				MALES			
	ITT IMPACT	BASELINE MEAN	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN	ITT IMPACT	BASELINE MEAN	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Hours in collecting water	-0.030	0.794	0.961	0.927	-0.114	0.674	0.777	0.668
	(0.09)				(0.07)			
Hours in collecting firewoods	0.092	0.558	0.619	0.706	-0.078	0.451	0.579	0.505
	(0.08)				(0.08)			
Hours in collecting nuts	0.063	0.151	0.232	0.286	0.014	0.132	0.109	0.121
	(0.06)				(0.03)			
Hours in taking care of children, cooking or cleaning	-0.157	1.833	2.561	2.397	0.062	0.830	0.422	0.476
	(0.16)				(0.06)			
Hours in taking care of elderly or sick	0.192*	0.419	0.325	0.510	0.031	0.303	0.225	0.260
	(0.08)				(0.06)			
Hours in any chores	0.162	3.755	4.699	4.826	-0.088	2.390	2.111	2.031
	(0.27)				(0.18)			
Total hours of work and chores in the past week	5.375*	35.998	49.871	55.289	0.437	34.195	44.435	44.887
	(2.45)				(2.51)			
N	930	930	509	421	1,123	1,123	555	568

Notes: Linear models were estimated on the separate subsamples of female and male youth interviewed both at baseline and Round 4. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p<0.05, **p<0.01.

Chapter 8

Table C.8.1: Cash-plus impacts on mental health indicators, by gender (ANCOVA)

	FEMALES				MALES			
	ITT IMPACT	BASELINE MEAN	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN	ITT IMPACT	BASELINE MEAN	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Reports depressive symptoms (CES-D10>=10)	0.066	0.268	0.210	0.276	0.062	0.306	0.323	0.384
	(0.03)				(0.04)			
depression index	0.645	6.560	6.434	7.071	0.781	6.756	7.146	7.912
	(0.36)				(0.43)			
ELDI (0-39)	0.293	4.037	4.609	4.967	0.253	3.020	3.193	3.393
	(0.42)				(0.28)			
Well-being	0.200	3.228	3.493	3.748	0.266	2.640	2.802	3.016
	(0.27)				(0.24)			
Risk	0.099	0.343	0.411	0.511	0.011	0.183	0.195	0.204
	(0.11)				(0.05)			
Relations	-0.006	0.466	0.705	0.708	-0.021	0.197	0.196	0.173
	(0.13)				(0.06)			
N	930	930	509	421	1,123	1,123	555	568

Notes: Linear models were estimated on the separate subsamples of female and male youth interviewed both at baseline and Round 4. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p<0.05, **p<0.01.

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Table C.9.1: Cash-plus impacts on occupational aspirations, by gender (ANCOVA)

	FEMALES				MALES			
	ITT IMPACT	BASELINE MEAN	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN	ITT IMPACT	BASELINE MEAN	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Teacher	-0.018	0.440	0.367	0.344	0.013	0.389	0.243	0.255
	(0.03)				(0.03)			
Doctor/Health care professional	-0.025	0.335	0.255	0.235	0.010	0.157	0.121	0.136
	(0.03)				(0.02)			
Government/parastatal	-0.005	0.022	0.018	0.012	-0.000	0.069	0.022	0.021
	(0.01)				(0.01)			
Business ownwer	0.025	0.032	0.086	0.114	0.019	0.042	0.133	0.150
	(0.02)				(0.02)			
Other	0.025	0.171	0.273	0.295	-0.045	0.344	0.481	0.438
	(0.03)				(0.03)			
N	930	930	509	421	1,123	1,123	555	568

Notes: Linear models were estimated on the separate subsamples of female and male youth interviewed both at baseline and Round 4. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p<0.05, **p<0.01.

Table C.9.2: Cash-plus impacts on migration, by gender (single difference)

	FEMALES			MALES		
	ITT IMPACT	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN	ITT IMPACT	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)	(6)
Wants to migrate	-0.026	0.301	0.273	-0.033	0.310	0.280
	(0.03)			(0.04)		
Wants to migrate to the same region	0.004	0.157	0.159	0.006	0.153	0.162
	(0.03)			(0.03)		
Wants to migrate to another region	-0.030	0.143	0.114	-0.039	0.157	0.118
	(0.02)			(0.03)		
N	930	509	421	1,123	555	568

Notes: Linear models were estimated on the separate subsamples of female and male youth interviewed both at baseline and Round 4. Regressions control for gender, age, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p<0.05, **p<0.01.

Table C.9.3: Cash-plus impacts on attitudes, by gender (ANCOVA)

	FEMALES				MALES			
	ITT IMPACT	BASELINE MEAN	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN	ITT IMPACT	BASELINE MEAN	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Locus of control index	-0.027	3.188	3.218	3.197	0.018	3.218	3.172	3.194
	(0.03)				(0.04)			
Social support index	0.062	3.875	3.903	3.966	-0.069	4.121	4.130	4.071
	(0.04)				(0.04)			
Quality of life ladder: 1 (Worst) to 10 (Best)	0.227	3.440	4.550	4.762	-0.016	4.066	4.978	4.981
	(0.17)				(0.17)			
Self-esteem index	-0.014	3.887	3.951	3.937	0.042	3.981	3.910	3.958
	(0.07)				(0.04)			
N	930	930	509	421	1,123	1,123	555	568
Entrepreneurial attitude index	0.023		0.799	0.824	-0.002		0.848	0.846
	(0.02)				(0.01)			
N	930		509	421	1,123		555	568

Notes: Linear models were estimated on the separate subsamples of female and male youth interviewed both at baseline and Round 4. Regressions control for gender, age, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p<0.05, **p<0.01.

Table C.9.4: Cash-plus impacts on decision making, by gender (single difference)

	FEMALES			MALES		
	ITT IMPACT	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN	ITT IMPACT	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)	(6)
Decision making ladder: 1 (low) to 10 (high)	-0.158	5.246	5.116	0.151	5.692	5.847
	(0.23)			(0.18)		
N	930	509	421	1,123	555	568
Major purchases for the household	-0.028	0.102	0.074	0.030	0.316	0.336
	(0.02)			(0.03)		
N	928	508	420	1,087	534	553
Business start-up by yourself	0.001	0.507	0.506	0.056	0.624	0.671
	(0.04)			(0.04)		
N	851	460	391	1,048	510	538
Your education	-0.013	0.534	0.521	0.042	0.638	0.670
	(0.04)			(0.04)		
N	886	481	405	1,065	519	546
Your access to SRH	-0.038	0.739	0.704	-0.021	0.897	0.876
	(0.04)			(0.02)		
N	915	499	416	1,084	534	550

Notes: Linear models were estimated on the separate subsamples of female and male youth interviewed both at baseline and Round 4. Regressions control for gender, age, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p<0.05, **p<0.01.

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Table C.10.1: Cash-plus impacts on attitudes on gender indicators, by gender (ANCOVA)

	FEMALES				MALES			
	ITT IMPACT	BASELINE MEAN	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN	ITT IMPACT	BASELINE MEAN	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
GEM scale (0-24)	-0.118	11.838	13.426	13.226	0.173	13.182	15.257	15.412
	(0.45)				(0.61)			
N	619	619	345	274	769	769	393	376
Violence sub-scale (0-6)	-0.154	3.499	3.901	3.741	0.160	3.876	3.945	4.075
	(0.12)				(0.18)			
N	856	856	466	390	1,055	1,055	523	532
Reproductive health sub-scale (0-5)	-0.141	2.687	3.036	2.893	-0.013	2.823	3.386	3.385
	(0.11)				(0.13)			
N	742	742	416	326	936	936	474	462
Sexuality sub-scale (0-8)	0.186	4.202	4.744	4.914	0.126	4.459	5.340	5.456
	(0.19)				(0.20)			
N	724	724	399	325	897	897	456	441
Domestic chores and daily life sub-scale (0-5)	-0.144	1.435	1.688	1.519	-0.161	1.981	2.368	2.200
	(0.11)				(0.15)			
N	901	901	496	405	1,080	1,080	535	545

Notes: Linear models were estimated on the separate subsamples of female and male youth interviewed both at baseline and Round 4. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p<0.05, **p<0.01.

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Table C.11.1: Cash-plus impacts on partner/relationship indicator, by gender (ANCOVA)

	FEMALES				MALES			
	ITT IMPACT	BASELINE MEAN	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN	ITT IMPACT	BASELINE MEAN	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Ever had spouse/cohabiting partner	0.032	0.020	0.244	0.266	0.051*	0.004	0.045	0.090
	(0.03)				(0.02)			
Single/never married	-0.032	0.980	0.756	0.734	-0.051*	0.996	0.955	0.910
	(0.03)				(0.02)			
Has a girlfriend or boyfriend	-0.032	0.263	0.342	0.311	-0.071*	0.099	0.438	0.357
	(0.04)				(0.03)			
N	930	930	509	421	1,123	1,123	555	568

Notes: Linear models were estimated on the separate subsamples of female and male youth interviewed both at baseline and Round 4. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p<0.05, **p<0.01.

Table C.11.2: Cash-plus impacts on first sex indicators, by gender (single difference)

	FEMALES			MALES		
	ITT IMPACT	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN	ITT IMPACT	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)	(6)
Ever had sex	-0.001	0.534	0.545	-0.020	0.448	0.411
	(0.04)			(0.03)		
N	735	399	336	972	480	492
Age at first sexual intercourse	-0.001	17.869	17.962	-0.339	18.088	17.642
	(0.12)			(0.20)		
N	396	213	183	416	215	201
First sexual intercourse forced/pressured/tricked - among sexually debuted	-0.006	0.146	0.132	-0.004	0.009	0.005
	(0.03)			(0.01)		
N	395	213	182	417	215	202

Notes: Linear models were estimated on the separate subsamples of female and male youth interviewed both at baseline and Round 4. Regressions control for gender, age, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p<0.05, **p<0.01.

Table C.11.3: Cash-plus impacts on contraceptive knowledge, by gender (ANCOVA)

	FEMALES				MALES			
	ITT IMPACT	BASELINE MEAN	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN	ITT IMPACT	BASELINE MEAN	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Has knowledge about contraceptives	-0.004	0.747	0.988	0.985	-0.010	0.801	0.958	0.940
	(0.01)				(0.01)			
Has knowledge about modern contraceptives	-0.007	0.687	0.980	0.976	-0.010	0.769	0.958	0.940
	(0.01)				(0.01)			
N	914	914	502	412	1,112	1,112	549	563

Notes: Linear models were estimated on the separate subsamples of female and male youth interviewed both at baseline and Round 4. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p<0.05, **p<0.01.

Table: C.11.4: Cash-plus impacts on contraceptive use, by gender (single difference)

	FEMALES			MALES		
	ITT IMPACT	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN	ITT IMPACT	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)	(6)
Last sex: used condom	-0.046	0.307	0.263	-0.066	0.637	0.572
	(0.04)			(0.05)		
N	585	319	266	547	278	269
Currently using contraceptive - among sexually debuted	-0.061	0.624	0.560	-0.014	0.687	0.673
	(0.04)			(0.05)		
N	585	319	266	547	278	269
Currently using modern contraceptive - among sexually debuted	-0.058	0.605	0.545	-0.019	0.687	0.669
	(0.04)			(0.05)		
N	585	319	266	547	278	269

Notes: Linear models were estimated on the separate subsamples of female and male youth interviewed both at baseline and Round 4. Regressions control for gender, age, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p<0.05, **p<0.01.

Table C.11.5: Cash-plus impacts on recent sex indicators, by gender (ANCOVA)

	FEMALES				MALES			
	ITT IMPACT	BASELINE MEAN	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN	ITT IMPACT	BASELINE MEAN	ROUND 3 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Number of sexual partners in last 12 months	0.245	0.344	0.712	1.000	-0.024	0.307	1.565	1.524
	(0.26)				(0.11)			
N	585	585	319	266	547	547	278	269
Among ever had sex: has had concurrent sexual relationships in last 12 months	-0.005	0.005	0.031	0.026	-0.020	0.026	0.126	0.100
	(0.02)				(0.03)			
N	585	585	319	266	547	547	278	269
Last sex: partner 5 or more years older	-0.068	0.088	0.470	0.398	0.004	0.000	0.000	0.004
	(0.05)				(0.00)			
N	547	547	296	251	522	522	266	256
Last sex: partner 10 or more years older	0.012	0.011	0.081	0.092	0.000**	0.000	0.000	0.000
	(0.02)				(0.00)			
N	547	547	296	251	522	522	266	256

Notes: Linear models were estimated on the separate subsamples of female and male youth interviewed both at baseline and Round 4. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p<0.05, **p<0.01.

Table C.11.6: Cash-plus impacts on HIV knowledge, by gender (single difference)

	FEMALES			MALES		
	ITT IMPACT	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN	ITT IMPACT	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)	(6)
Knows that sex with one uninfected monogamous partner can reduce risk of HIV	-0.052	0.739	0.694	-0.002	0.712	0.714
	(0.04)			(0.03)		
Knows mosquitos do not transfer HIV	-0.042	0.917	0.876	-0.015	0.839	0.821
	(0.02)			(0.03)		
Knows regular condom use reduces HIV risk	-0.001	0.790	0.793	0.034	0.706	0.741
	(0.03)			(0.04)		
Knows HIV is not transferred through food	-0.065**	0.929	0.864	-0.005	0.807	0.801
	(0.02)			(0.03)		
N	924	505	419	1,120	553	567

Notes: Linear models were estimated on the separate subsamples of female and male youth interviewed both at baseline and Round 4. Regressions control for gender, age, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p<0.05, **p<0.01.

Table C.11.7: Cash-plus impacts on HIV knowledge, by gender (ANCOVA)

	FEMALES				MALES			
	ITT IMPACT	BASELINE MEAN	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN	ITT IMPACT	BASELINE MEAN	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Knows that a good-looking person can have HIV	0.001	0.789	0.835	0.840	-0.001	0.821	0.787	0.783
	(0.02)				(0.03)			
Knows that a mother can trasmit HIV to her child	0.001	0.745	0.777	0.784	-0.038	0.651	0.683	0.642
	(0.03)				(0.03)			
Knows there are medicines that help an HIV positive person to live longer	0.025	0.872	0.903	0.929	-0.034	0.887	0.880	0.847
	(0.02)				(0.02)			
N	891	891	485	406	1,097	1,097	540	557

Notes: Linear models were estimated on the separate subsamples of female and male youth interviewed both at baseline and Round 4. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p<0.05, **p<0.01.

Table C.11.8: Cash-plus impacts on HIV risk indicators, by gender (ANCOVA)

	FEMALES				MALES			
	ITT IMPACT	BASELINE MEAN	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN	ITT IMPACT	BASELINE MEAN	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Perceived HIV risk: moderate/ high	-0.033	0.041	0.094	0.061	-0.009	0.016	0.046	0.036
	(0.02)				(0.01)			
N	907	907	498	409	1,091	1,091	539	552
Perceived HIV risk: low	-0.033	0.092	0.221	0.188	-0.040	0.168	0.202	0.159
	(0.03)				(0.03)			
N	907	907	498	409	1,091	1,091	539	552
Perceived HIV risk: none	0.067	0.868	0.685	0.751	0.049	0.816	0.751	0.804
	(0.04)				(0.03)			
N	907	907	498	409	1,091	1,091	539	552
Tested for HIV: Lifetime	0.028	0.457	0.804	0.835	0.023	0.428	0.652	0.674
	(0.03)				(0.03)			
N	925	925	506	419	1,118	1,118	551	567
Tested for HIV: 12 months	0.049	0.342	0.617	0.670	0.015	0.259	0.445	0.458
	(0.03)				(0.03)			
N	930	930	509	421	1,123	1,123	555	568
Received HIV test results: 12 months	0.025	0.730	0.807	0.831	-0.041	0.621	0.734	0.698
	(0.03)				(0.05)			
N	389	389	212	177	375	375	173	202

Notes: Linear models were estimated on the separate subsamples of female and male youth interviewed both at baseline and Round 4. Regressions control for gender, age and outcome value at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p<0.05, **p<0.01.

Chapter 12: Access to sexual and reproductive health services

Table C.12.1: Cash-plus impacts on knowledge of places to contraception, by gender (ANCOVA)

	FEMALES			MALES		
	ITT IMPACT	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN	ITT IMPACT	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)	(6)
Contraception at clinic	0.018	0.953	0.971	0.021	0.899	0.919
	(0.01)			(0.02)		
Contraception at kiosk/shop	-0.018	0.084	0.067	-0.006	0.077	0.070
	(0.02)			(0.02)		
Contraception at pharmacy	-0.080	0.385	0.306	-0.005	0.267	0.255
	(0.04)			(0.04)		
Contraception at free dispenser	0.071*	0.090	0.164	0.008	0.085	0.093
	(0.03)			(0.03)		
Contraception do not know	0.000	0.016	0.014	-0.012	0.058	0.048
	(0.01)			(0.02)		
Condom at clinic	0.037	0.809	0.846	0.006	0.849	0.857
	(0.03)			(0.03)		
Condom at kiosk/shop	-0.007	0.440	0.437	-0.004	0.396	0.386
	(0.04)			(0.04)		
Condom at pharmacy	-0.010	0.570	0.565	0.004	0.611	0.611
	(0.05)			(0.03)		
Condom at free dispenser	0.051	0.104	0.157	0.017	0.090	0.107
	(0.03)			(0.02)		
Condom do not know	0.009	0.024	0.031	-0.005	0.022	0.018
	(0.01)			(0.01)		
Test at clinic	0.007	0.982	0.988	-0.001	0.964	0.963
	(0.01)			(0.01)		
Test at kiosk/shop	0.020	0.012	0.031	-0.005	0.043	0.037
	(0.01)			(0.01)		
Test at pharmacy	-0.021	0.136	0.116	-0.008	0.133	0.120
	(0.02)			(0.02)		
Test at free dispenser	0.077**	0.088	0.169	0.015	0.092	0.106
	(0.03)			(0.03)		
Test do not know	-0.005	0.008	0.002	0.003	0.013	0.016
	(0.00)			(0.01)		
N	930	509	421	1,123	555	568

Notes: Linear models were estimated on the separate subsamples of female and male youth interviewed both at baseline and Round 4. Regressions control for gender, age, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p<0.05, **p<0.01.

Table C.12.2: Cash-plus impacts on SRH visits, by gender (single difference)

	FEMALES			MALES		
	ITT IMPACT	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN	ITT IMPACT	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)	(6)
Visited health facility for SRH services - lifetime	0.004	0.587	0.599	0.069*	0.155	0.218
	(0.04)			(0.03)		
N	930	509	421	1,123	555	568
Visited health facility for SRH services - past 12 months	0.023	0.513	0.544	0.055*	0.128	0.178
	(0.04)			(0.03)		
N	930	509	421	1,123	555	568
Last SRH visit at dispensary - past 12 months	0.019	0.261	0.288	0.058	0.324	0.347
	(0.05)			(0.09)		
N	490	261	229	172	71	101
Last SRH visit at clinic, health care center, hospital, doctor - past 12 months	-0.019	0.739	0.712	-0.058	0.676	0.653
	(0.05)			(0.09)		
N	490	261	229	172	71	101
Last SRH visit at government facility - past 12 months	0.033	0.923	0.956	0.006	0.873	0.901
	(0.02)			(0.05)		
N	490	261	229	172	71	101

Notes: Linear models were estimated on the separate subsamples of female and male youth interviewed both at baseline and Round 4. Regressions control for gender, age, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p<0.05, **p<0.01.

Table C.12.3: Cash-plus impacts on reasons for seeking SRH services, by gender (single difference)

	FEMALES			MALES		
	ITT IMPACT	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN	ITT IMPACT	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)	(6)
Last SRH visit reason: contraception, condoms	0.073	0.556	0.624	0.003	0.704	0.723
	(0.05)			(0.08)		
N	490	261	229	172	71	101
Last SRH visit reason: STI testing/treatment	-0.021	0.038	0.017	-0.048	0.169	0.119
	(0.01)			(0.06)		
N	490	261	229	172	71	101
Last SRH visit reason: pregnancy, maternity, gynecological exam	-0.053	0.402	0.354	0.065	0.070	0.129
	(0.05)			(0.05)		
N	490	261	229	172	71	101
Requested contraceptives at health consultation	-0.033	0.552	0.533	0.188*	0.329	0.505
	(0.05)			(0.08)		
N	490	261	229	171	70	101

Notes: Linear models were estimated on the separate subsamples of female and male youth interviewed both at baseline and Round 4. Regressions control for gender, age, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p<0.05, **p<0.01.

Table C.12.4: Cash-plus impacts on health insurance, by gender (single difference)

	FEMALES			MALES		
	ITT IMPACT	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN	ITT IMPACT	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)	(6)
Registered or covered by health insurance	-0.007	0.090	0.083	-0.042	0.128	0.086
	(0.02)			(0.02)		
National Health Insurance Fund (NHIF)	-0.020*	0.033	0.012	-0.009	0.027	0.018
	(0.01)			(0.01)		
CHF or CBHI	0.015	0.051	0.067	-0.035	0.094	0.060
	(0.02)			(0.02)		
Other private health insurance	-0.002	0.002	0.000	0.004	0.004	0.007
	(0.00)			(0.00)		
Other health insurance	0.000	0.004	0.005	-0.002	0.005	0.004
	(0.00)			(0.01)		
N	930	509	421	1,123	555	568

Notes: Linear models were estimated on the separate subsamples of female and male youth interviewed both at baseline and Round 4. Regressions control for gender, age, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p<0.05, **p<0.01.

Chapter 13. Violence

Table C.13.1: Cash-plus impacts on experiences of violence past 12 months, by gender (ANCOVA)

	FEMALES				MALES			
	ITT IMPACT	BASELINE MEAN	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN	ITT IMPACT	BASELINE MEAN	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Experienced emotional abuse	-0.005	0.384	0.307	0.300	0.026	0.317	0.231	0.230
	(0.04)				(0.04)			
Experienced physical violence	0.024	0.239	0.106	0.148	-0.014	0.279	0.131	0.105
	(0.04)				(0.03)			
Experienced emotional or physical violence	-0.004	0.461	0.319	0.323	0.011	0.409	0.269	0.251
	(0.04)				(0.05)			
Experienced emotional IPV	0.015	0.071	0.118	0.139	0.051	0.120	0.131	0.172
	(0.03)				(0.04)			
Experienced physical IPV	0.013	0.044	0.067	0.094	-0.003	0.098	0.085	0.075
	(0.03)				(0.03)			
Experienced emotional or physical IPV	0.014	0.096	0.130	0.152	0.028	0.156	0.158	0.176
	(0.03)				(0.04)			
N	477	477	254	223	499	499	260	239

Notes: Linear models were estimated on the panel of youth interviewed both at baseline and Round 4. Regressions control for gender, age at baseline, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p<0.05, **p<0.01. Youth who reported sexual debut at baseline were excluded from the analysis.

Table C.13.2: Cash-plus impacts on experiences of violence in previous 12 months and over a lifetime, by gender (single difference)

	FEMALES			MALES		
	ITT IMPACT	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN	ITT IMPACT	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)	(6)
Experienced sexual violence	-0.042	0.083	0.049	0.002	0.008	0.008
	(0.03)			(0.01)		
Experienced sexual violence - lifetime	-0.072*	0.169	0.112	0.000	0.004	0.004
	(0.03)			(0.01)		
Experienced emotional/physical/sexual violence	-0.022	0.339	0.323	-0.003	0.269	0.255
	(0.04)			(0.05)		
Forced first sexual intercourse	-0.035	0.102	0.076	0.000**	0.000	0.000
	(0.02)			(0.00)		
N	477	254	223	500	260	240

Notes: Linear models were estimated on the separate subsamples of female and male youth interviewed both at baseline and Round 4. Regressions control for gender, age, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p<0.05, **p<0.01.

Table C.13.3: Cash-plus impacts on help seeking for violence, by gender (single difference)

	FEMALES			MALES		
	ITT IMPACT	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN	ITT IMPACT	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)	(6)
Sought help for emotional/physical/sexual violence	-0.171	0.535	0.444	0.057	0.129	0.177
	(0.09)			(0.06)		
Sought help from formal source for emotional/physical/ sexual violence	-0.043	0.116	0.111	0.083**	0.000	0.081
	(0.05)			(0.03)		
Sought help from informal source for emotional/physical/ sexual violence	-0.150	0.488	0.431	0.007	0.129	0.129
	(0.09)			(0.06)		
N	158	86	72	132	70	62

Notes: Linear models were estimated on the separate subsamples of female and male youth interviewed both at baseline and Round 4. Regressions control for gender, age, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p<0.05, **p<0.01.

Table C.13.4: Impacts on experiences of perpetration in the previous 12 months, by gender (single difference)

	FEMALES			MALES		
	ITT IMPACT	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN	ITT IMPACT	ROUND 4 CASH ONLY MEAN	ROUND 4 CASH PLUS MEAN
	(1)	(2)	(3)	(4)	(5)	(6)
Perpetrated emotional abuse	-0.023	0.114	0.103	0.007	0.042	0.046
	(0.03)			(0.01)		
Perpetrated physical violence	-0.027	0.055	0.040	-0.006	0.046	0.037
	(0.03)			(0.02)		
N	477	254	223	500	260	240

Notes: Linear models were estimated on the separate subsamples of female and male youth interviewed both at baseline and Round 4. Regressions control for gender, age, PAA × size fixed effects. Standard errors adjusted for clustering at the community level are reported in parentheses. *p<0.05, **p<0.01.

Appendix D. Multiple Hypothesis Testing

CHAPTER	NUMBER OF OUTCOMES TESTED	NUMBER OF OUTCOMES SIGNIFICANT WITHOUT ADJUSTMENT	NUMBER OF OUTCOMES SIGNIFICANT WITH CORRECTION	OUTCOME(S)
7. Education and livelihoods	3	2	2	Started a business Engaged in economic activities
8. Mental health	4	1	1	CESD
10. GEM	5	0	0	N/A
11. Sexual behaviour and knowledge	10	1	1	HIV test at dispensary
12. Health seeking	5	1	1	HIV testing at dispensary

Evaluation team

UNICEF Innocenti – Global Office of Research and Foresight: Valeria Groppo, Hassan Kihanzah, Lusajo Kajula, Graca Marwerwe, Rosemarie Mwaipopo, Leah Prencipe, Nyasha Tirivayi, Jennifer Waidler, Stephanie Zuilkowski

University at Buffalo: Tia Palermo (co-Principal Investigator), Sarah Quiñones

EDI Global: Johanna Choumert Nkolo (co-Principal Investigator), Respichius Mitti (co-Principal Investigator), Bhoke Munanka, Marie Mallet

TASAF: Paul Luchemba, Tumpe Mnyawami Lukongo

TACAIDS: Aroldia Mulokozi

UNICEF Tanzania: Ulrike Gilbert, Paul Quarles van Ufford, Rikke Le Kirkegaard, Frank Eetaama, Jennifer Matafu, Diego Angemi, Luisa Natali.

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Via degli Alfani 58
50121, Florence, Italy
Tel: (+39) 055 20 330
Email: innocenti@unicef.org
Social media: @UNICEFInnocenti on Facebook, Instagram, LinkedIn, Twitter and YouTube

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