WFP EVALUATION

Impact Evaluation of Cash-Based Transfers on Food Security and Gender Equality in Rwanda

Impact Evaluation Baseline Report
Office of Evaluation

WFP

World Food Programme

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Overview

This report presents data from the Rwanda impact evaluation baseline survey. It describes the pre-programme baseline situation, looking at primary outcomes as well as other variables of interest. The report begins by reviewing the methodology of the evaluation, its design and randomization strategy (see Section 2). It then describes the different data sources and tools that were used to collect the baseline data (see Section 3) and presents statistics that characterise the respondents in the survey, including a break-out by treatment group (see Section 4). Lastly, the report presents key challenges and conclusions (see Section 5) from this phase of the impact evaluation.

PROGRAMME SUMMARY

WFP Rwanda has launched the Sustainable Market Alliance and Asset Creation for Resilient Communities and Gender Transformation (SMART) project, which is the focus of this impact evaluation. The project aims to contribute to community resilience through a package of support, including a stronger soil and water management asset base, livelihood strengthening and diversification, farmer organization capacity strengthening and access to inputs and markets, and social cohesion and gender transformation activities. SMART selectively targets communities with households categorized in the lower national social and economic vulnerability categories. In contrast to other development programmes that target the "ultra-poor" with unconditional cash or asset transfers, SMART engages vulnerable households – in the form of Food Assistance for Assets (FFA) – whose heads of household are paid a wage to engage in activities linked to the creation of productive assets (for example, irrigation systems, terrace and marshland restoration, etc.), with monitoring to ensure compliance.

SMART will be implemented in eight sectors across five different districts that have the highest levels of food insecurity and vulnerability to climate shocks: Rwankuba and Ruganda sectors (Karongi district); Ruhango and Mukura sectors (Rutsiro district); Kaduha and Kamegeri sectors (Nyamagabe district); Rusenge sector (Nyaruguru district); and Murama sector (Kayonza district). Approximately 180,000 people will benefit from the SMART project (36,000 direct beneficiaries, 144,000 indirect beneficiaries), including approximately 4,500 refugees.

IMPACT EVALUATION SUMMARY

The Rwanda impact evaluation focuses on 78 communities across 13 municipalities in the sectors of Kaduha, Murama, Ruhango, Rusenge and Rwankuba for a total of 1,170 households.

The Rwanda impact evaluation will contribute to two WFP impact evaluation windows (coordinated portfolios of impact evaluations). Under the Cash-Based Transfers and Gender (CBT&G) window, this evaluation will explore how FFA activities can promote gender equality and women's empowerment (GEWE) through engaging women in work outside the home.[1] This window coordinates a portfolio of impact evaluations to measure the impacts of cash transfers on GEWE outcomes across a series of WFP country programmes. The hypothesis underlying the window is that providing women with opportunities to work outside the household will enhance their agency, as well as increase their control over financial resources, which in turn leads to expanded social and economic empowerment.

The focus of the Climate and Resilience (C&R) window is to understand how resilience programming can best ensure that vulnerable populations have improved and sustained access to adequate and nutritious food.[2]

The C&R window recognises that food insecurity has many drivers, and climate change and extreme weather events are exacerbating food insecurity or increasing the likelihood and severity of shocks associated with food crises. Packages of multiple interventions are therefore needed to develop and maintain the resilience of beneficiaries over time to any shocks that can adversely affect food security.

For both windows, the goal is to increase the predictive power of evidence generated across contexts to improve WFP's programming. The ambition is to learn what works (and what does not) in a way that informs country office programming and contributes to a global evidence base.

The impact evaluation is designed as a clustered Randomized Control Trial (RCT), including a baseline survey before the intervention, a midline survey during the intervention, and an endline survey after the

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[1] The window was developed by WFP's Office of Evaluation in partnership with WFP's Cash-Based Transfer (CBT) programme teams and Gender Office (GEN), as well as the World Bank's Development Impact Evaluation (DIME) department.
[2] The window was developed by WFP's Office of Evaluation in partnership with the Asset Creation and Livelihoods Unit (OSZPR) and the Climate and Disaster Risk Reduction Programme (OSZIR), as well as the World Bank's DIME department.

intervention. Additionally, the midline survey will be accompanied by several rounds of High Frequency Phone Surveys (HFPS) that allow us to measure food security and resilience outcomes more frequently and over shorter periods of time (also a core feature of the C&R impact evaluation window). The HFPS allows us to get a better understanding of resilience, by exploring not only the static difference between beneficiaries and non-beneficiaries, but also the dynamics of food security throughout the impact evaluation period.

Further details on the SMART project and the impact evaluation design can be found in the Impact Evaluation Inception Report.

IMPACT EVALUATION QUESTIONS

The main impact evaluation questions can be divided in two according to their respective windows as follows.

Climate and Resilience (C&R) window questions:

1. Can SMART increase the overall resilience of households?

2. How does SMART affect resilience over time and throughout the seasons?

3. When is the best time of the year to provide cash payments and the best time to involve participants in FFA?

Cash-Based Transfers and Gender (CBT&G) window questions:

1. What is the impact of women's participation in FFA (working outside the household and receiving cash in return) on their social and economic empowerment?

2. What is the impact of conditional cash transfers for work, on women's social and economic empowerment, as well as on household income and welfare?

BASELINE SURVEY PROCESS

We use a clustered, randomized design for estimating credible and unbiased treatment effects of the SMART programme's resilience package.

To begin, DIME, the Office of Evaluation and the WFP country office selected 13 municipalities. Within each municipality, five to six communities were selected using the following criteria: they did not expect a WFP transfer during the year of the programme (2021); they were classified as highly vulnerable, rural sectors; and they were within walking distance of a potential public works site.

Next, the 78 eligible communities (1,170 households in total) were randomly assigned into either one of two treatment groups or the control group:

- Treatment Group 1: Beneficiaries receive a cash transfer (approximately USD 90) disbursed over three months, with payment conditional to working on an asset. The primary female decision maker of the household is registered to receive the transfer and work on the asset.

- Treatment Group 2: Beneficiaries receive a cash transfer (approximately USD 90) disbursed over three months, with payment conditional to working on an asset. Either the primary female or male decision maker is registered to receive the transfer and work on the asset.

- Control Group: The primary female or male decision maker is registered to receive the transfer and work on the asset (similar to Treatment 2), but not until after the endline surveys are completed.

The baseline multi-module household survey was administered between December 2020 and January 2021 to both male and female heads of household. The survey took approximately two hours. Data collection was conducted using Android tablets running SurveyCTO data-collection software.

KEY INSIGHTS

The data confirm that the cross-community randomization of treatment and control groups, and the baseline survey itself, were successfully implemented. This is important to ensure that the impact evaluation can deliver rigorous estimates of the short-run and medium-run impacts of FFA and resilience programming on a broad range of outcomes associated with resilience, women's economic empowerment, and household well-being.

The data show that targeted households are highly vulnerable and experienced high levels of food insecurity, low levels of food consumption, and have diets lacking in nutritional diversity. Real annual household consumption in the sample was USD 1,166, well below international poverty thresholds at just USD 0.60 per

capita per day. Wage labour represents 74 percent of household income, and 41 percent of households reported relying on emergency or crisis coping strategies.

The descriptive analysis highlights the potential impacts of resilience programming on households' livelihoods and well-being. Providing reliable sources of income from public works and diversified livelihoods from asset creation activities may meaningfully increase household resilience.

Intra-household gender inequality in the sample is substantial, which is both an important issue to address in itself as well as ipertinent to households' economic outlooks. The baseline data show that women have relatively limited agency over their time-use, earn 70 percent of what male heads of household earn, spend a lot of time on chores, and spend 26 percent less time outside the home. Women also frequently reported high rates of depression and being subject to psychological and physical intimate partner violence (IPV).

Technical Report

1. Introduction

1.   Gender inequality and food insecurity remain two of the most important issues for developing countries. While social protection programmes directed to address both gender inequality and food insecurity are often implemented in different developing country contexts, the causal impacts of such programmes are often unknown or inconclusive. The World Economic Forum (WEF) Global Gender Report for 2021 ranks Rwanda 48th of 156 countries on its Gender Gap for Economic Participation and Opportunity Index, suggesting this is an area for improvement (WEF, 2021). At the same time, one fifth of Rwanda's population is food insecure (WFP, 2018), and the prevalence of malnourishment is assessed at 35.2 percent for 2021 according to *The Economist*'s Global Food Security Index.

2.   To test the causal impacts of WFP interventions, and to identify causal mechanisms across different contexts in a manner that can increase the external validity of evidence generated, WFP Office of Evaluation has created "impact evaluation windows" in partnership with the relevant WFP programme units and selected external partners. Impact evaluation windows are designed to deliver portfolios of rigorous impact evaluations in WFP priority areas over a three- to five-year period to enable the Office of Evaluation to pace this work in line with country office programmes. To support formal syntheses of this evidence, each impact evaluation window is guided by a window-level concept note and one or more pre-analysis plans. The Rwanda impact evaluation falls into the Office of Evaluation's "Cash-Based Transfers and Gender" (CBT&G) impact evaluation window, as well as its "Climate and Resilience" (C&R) impact evaluation window.

3.   **Cash-Based Transfer and Gender impact evaluation window:** WFP has partnered with the World Bank's Development Impact Evaluation (DIME) department, the WFP Cash-Based Transfer (CBT) division, and the WFP Gender Office (GEN) to create the CBT&G impact evaluation window. The hypothesis underpinning the CBT&G window's impact evaluation designs (under its first, pre-analysis plan) is that providing women with opportunities to work outside the household will enhance their agency as well as increase their control over financial resources, which in turn leads to expanded social and economic empowerment.

4.   **Climate and Resilience impact evaluation window:** The C&R impact evaluation window has been developed by the WFP Office of Evaluation in partnership with the Asset Creation and Livelihoods Unit (OSZPR) and the Climate and Disaster Risk Reduction Programme (OSZIR), as well as the World Bank's DIME department. The window's focus builds upon the WFP recognition that food insecurity has many drivers, and climate change and extreme weather events are exacerbating food insecurity or increasing the likelihood and severity of shocks associated with food crises. Packages of multiple interventions are therefore needed to develop and maintain the resilience of beneficiaries over time to any shocks that can adversely affect food security. The WFP Impact Evaluation Strategy elaborates on the WFP approach to evidence generation and the windows in more detail.

5.   Under the 2019–2023 Country Strategic Plan (CSP) for Rwanda, WFP implements a portfolio of resilience and social protection activities (Strategic Outcome 2) that focus on ensuring vulnerable populations in food-insecure areas have improved access to adequate and nutritious food all year. One such activity is the Sustainable Market Alliance and Assets creation for Resilient Communities and Gender Transformation (SMART) project, which contributes to community resilience through a package of support, including a stronger soil and water management asset base, livelihood strengthening and diversification, farmer organization capacity strengthening and access to inputs and markets, and social cohesion and gender transformation activities.[3] The impact evaluation seeks to understand how the resilience of individuals, households and communities is strengthened by the integrated package of support provided. Att the same time, the impact evaluation seeks to contribute important evidence on how best to deliver resilience programmes that support gender equality and women's empowerment (GEWE). To that effect, the impact evaluation in Rwanda contributes to both of the above-listed (see paragraphs 3 and 4) impact evaluation windows.

6.   The main impact evaluation questions can be divided according to their respective windows as follows.

C&R questions:

> 1.   Can the SMART programme increase the overall resilience of households?

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[3] The details on the Sustainable Market Alliance and Asset Creation for Resilient Communities and Gender Transformation (SMART) programme can be found in the Impact Evaluation Inception Report (DIME–OEV, 2022).

2. How does the SMART programme affect the resilience over time and throughout the seasons?

3. When is the best time of the year to provide cash payments and the best time to involve participants in Food Assistance for Assets (FFA) activities?

CBT&G questions:

1. What is the impact of women's participation in an FFA programme (working outside the household and receiving cash in return) on their social and economic empowerment?

2. What is the impact of conditional cash transfers for work, on women's social and economic empowerment, as well as on household income and welfare?

7.   For the CBT&G window focus, the Rwanda impact evaluation aims to estimate the impacts of FFA programmes targeting women on gender equality, household decision making, and women's social and economic empowerment and food security. The theory of change posits that these interventions impact perceptions of gender norms, attitudes, agency, consumption patterns and well-being (physical, social and psychological). Simultaneously, for the C&R window focus, the impact evaluation aims to understand how the FFA programme impacts households' and communities' resilience outcomes, including sustained food security throughout the year, and the ability to withstand seasonal stressors and idiosyncratic shocks.

8.   The impact evaluation is designed as a clustered Randomized Control Trial (RCT), including a baseline survey before the intervention, a midline survey during the intervention, and an endline survey after the intervention. Additionally, the midline survey will be accompanied by several rounds of High Frequency Phone Surveys (HFPS) that allow us to measure food security and resilience outcomes more frequently and over shorter periods of time (also a core feature of the C&R impact evaluation window). The HFPS allows us to get a better understanding of resilience, by exploring not only the static difference between beneficiaries and non-beneficiaries, but also the dynamics of food security throughout the impact evaluation period.

9.   This report presents data from the baseline survey to inform about the pre-programme situation while looking at primary outcomes as well as other variables of interest for both window foci. The report begins by describing the methodology of the evaluation design and randomization strategy (see Section 2). It then describes the different data sources and tools that were used to collect the baseline data (see Section 3) and presents statistics to describe the characteristics of respondents in the survey, including a break-out by treatment group (see Section 4). Lastly, the report presents key challenges and conclusions (see Section 5).

2. Randomization Strategy

10.   To identify the causal impacts of the treatment arms, the impact evaluation employs a clustered Randomized Control Trial (RCT) design. The clustered RCT approach is used because the programme intervenes at the community level, which does not allow for household-level randomization. As noted, 13 municipalities were selected. Within each municipality, five to six communities were selected for inclusion in the impact evaluation using the following criteria:

- They did not expect a WFP transfer in 2021.

- They are classified as highly vulnerable rural sectors.

- They are within walking distance of a potential public works site

11.   In a second step, the 78 eligible communities for the project were randomly assigned into either one of two treatment groups or the control group (see Figure 1), producing a clustered, randomized design.

Figure 1: Randomization design of Food Assistance for Assets (FFA) programme
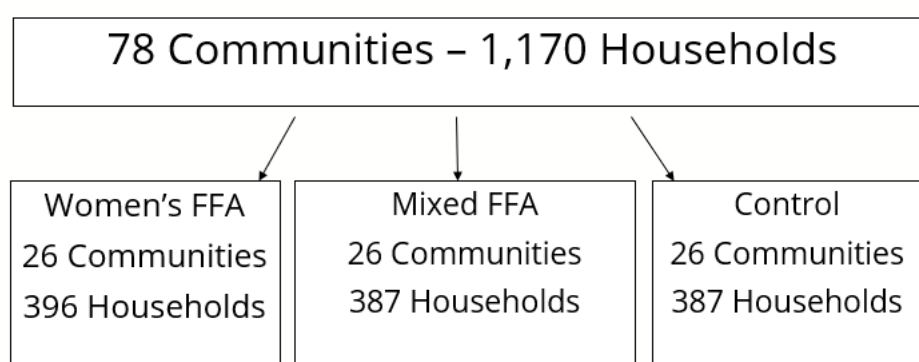
12.   The two treatment arms and control group are as follows:

- Treatment 1: Beneficiaries in this treatment group receive a cash transfer (approximately USD 90) disbursed over three months, with payment conditional to working on an asset. The primary female decision maker is registered to receive the transfer and work on the asset.

- Treatment 2: Beneficiaries in this treatment group receive a cash transfer (approximately USD 90) disbursed over three months, with payment conditional to working on an asset. Either the primary female or male decision maker is registered to receive the transfer and work on the asset.

- Control Group: The primary female or male decision maker is registered to receive the cash transfer and work on the asset (similar to treatment 2), but not until after the endline surveys are completed.

13.   A sufficient sample size in an impact evaluation assures that individual characteristics balance across treatment and control groups, so that these groups are the same on average and are representative for the population they were drawn from. The power calculations were implemented separately for the Cash-Based Transfer and Gender (CBT&G) outcomes and the Climate and Resilience (C&R) outcomes, with CBT&G focusing on low-frequency measures (baseline, midline, endline) and the C&R outcomes focusing on high-frequency measures (high-frequency surveys). The country office's budget and implementation capacities allow for the impact evaluation to be conducted in 78 communities. For the gender-focused component, we found that the available 1170 households in our sample were sufficient to potentially detect statistically significant effects on women's consumption. For the C&R component, a sample of eight households per site surveyed every two months was identified in the 78 clusters that are part of the evaluation. Full details of the evaluation design, including the evaluation's hypotheses, power calculations and programme theory of change, can be found in the Impact Evaluation Inception Report (DIME–OEV, 2022).

14.   The process of identifying communities and randomly assigning them into comparison groups follows the process whereby the Rwanda country office identifies eligible communities for the SMART programme, using the country office's targeting criteria. Since Food Assistance for Assets (FFA) activities are the first phase of implementing the SMART programme in a community, these are used as the reference for randomization in

this impact evaluation.

15.   WFP worked with local community leaders and government officials to identify the most vulnerable households within each community for project participant selection. A community in our impact evaluation sample on average has 132 households. A sample size of 1,170 households was drawn from the participant list based on SCOPE registration. The SCOPE platform is a web-based application used for beneficiary registrations, intervention setups, distribution planning, transfers and distribution reporting. To be eligible, all the households included have a male and female co-designated as "head" of the household. The household identification process in all 78 communities was the same regardless of "treatment" assignment to avoid any biases. A feature of the clustered Randomized Control Trial (RCT) design is that all selected beneficiary households within a community will receive the same treatment; this implies estimated effects will include both direct effects of participation and spillover effects across households within the community, while estimates from a within-community household randomization would include only direct effects of participation. All participants are expected to receive USD 90 – over 10 percent of the median annual income (USD 820) – by the end of the project.

2.1 SITE MAPPING

16.   The geographical coverage of the survey comprises the following five sectors: Kaduha, Murama, Ruhango, Rusenge and Rwankuba. The sites are all rural communities that mostly rely on agriculture and livestock for their income. We shall discuss the social and economic status of the sample households in the sections on demographics (see Section 4.2.1) and earnings (see Section 4.2.6) when we discuss the results from the survey.

Table 1: Number of households by sector

Sector	No. of households
Kaduha	123
Murama	303
Ruhango	192
Rusenge	172
Rwankuba	380

Figure 2: Site map
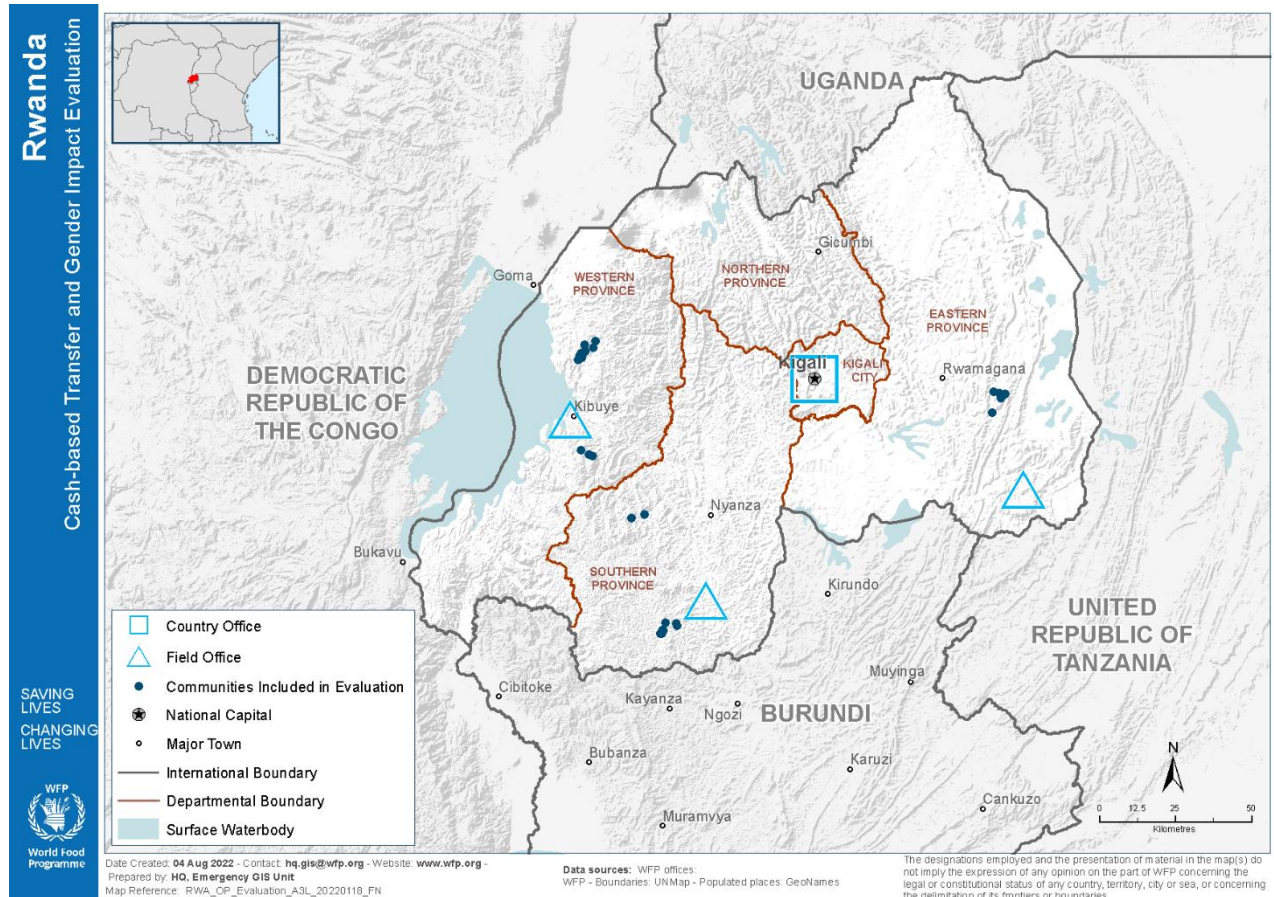
3. Data Source and Tools

17.   Baseline data was collected using a household survey covering outcomes of interest for the Cash-Based Transfer and Gender (CBT&G) impact evaluation window, the Climate and Resilience (C&R) impact evaluation window, and project-specific indicators. Households that had a female head of household were selected for the baseline survey. Once the household was chosen, the survey instrument was administered to both male and female heads of household. Please refer to the inception report for further discussion of household inclusion criteria, as well as full details on the data collection, instruments and outcome indicators for the evaluation (DIME–OEV, 2022).

18.   The baseline survey took place amid the COVID-19 pandemic (December 2020/January 2021), which will have affected the food security and coping strategies of the communities surveyed. The findings should be interpreted in this context.

19.   The main outcomes of interest for the impact evaluation are as follows (discussed in detail in Section 4.2). In addition, the table below shows which indicator categories were specifically relevant for the monitoring and reporting of the SMART project:

Table 2: Indicators

Indicator	CBT&G	C&R	SMART
Time use	X	X	
Earnings	X	X	
Perception of norms	X		
Attitudes	X		
Agency	X		
Consumption patterns	X	X	
Social, physical and psychological well-being	X	X	X
Food security		X	X
Financial outcomes		X	X
Shocks and coping strategies		X	X
Agricultural productivity		X	X

4. Descriptive Statistics and Balance

20.   The baseline data describe the socioeconomic background of the respondents from the target population. As we are collecting data on both final outcomes as well as intermediary outcomes, we can expect to see some potential connections that highlight mechanisms of impact. Such connections and their implications for future results will be discussed in the results section (see Section 4.2).

4.1 BALANCE OF OUTCOMES ACROSS TREATMENT GROUPS

21.   As the assignment of the sample was randomized across three groups, and sampling for the baseline survey was conducted before the randomization, households across the three groups should be comparable on both observable and unobservable characteristics at the time of the baseline. (This can be seen in the balance table in Figure 3 and 4.) The randomization ensures that all differences observed at endline are attributable (as causal impacts) to the project.

22.   Figures 3 and 4 together present a "balance table" comparing the means of the three groups for key outcomes of interest.   T-tests are conducted to identify any statistically significant differences between these. Except for the indicator of "Yearly Female HoH Earnings", the differences between the groups are statistically insignificant at the 5 percent level. Given that assignment was randomized, we believe the differences between groups on yearly earnings for male and female heads of household are likely spurious. We will test the robustness of our results in midline and endline analyses, including controls for baseline earnings.

Figure 3: Baseline balance – 1

Variable	(1) Control N/[Clusters]	(1) Control Mean/SD	(2) Standard N/[Clusters]	(2) Standard Mean/SD	(3) Female Only N/[Clusters]	(3) Female Only Mean/SD	T-test Difference (1)-(2)	T-test Difference (1)-(3)	T-test Difference (2)-(3)
Food Consumption Score (0 to 112)	387 [26]	30.720 (15.147)	387 [26]	30.787 (17.645)	396 [26]	30.761 (22.370)	-0.067	-0.042	0.025
Used a Livelihood Coping Mechanism	387 [26]	0.969 (0.166)	387 [26]	0.948 (0.228)	396 [26]	0.952 (0.228)	0.021	0.017	-0.004
Yearly Female HoH Earnings (2019 PPP USD)	387 [26]	241.946 (295.485)	387 [26]	292.871 (397.355)	396 [26]	225.766 (316.238)	-50.926**	16.180	67.106**
Yearly Male HoH Earnings (2019 PPP USD)	387 [26]	333.395 (533.025)	387 [26]	344.856 (671.046)	396 [26]	271.851 (548.458)	-11.461	61.544	73.005*
Predicted Consumption (2019 PPP USD)	387 [26]	1215.776 (1247.820)	387 [26]	1143.168 (1629.389)	396 [26]	1140.482 (1208.141)	72.608	75.293	2.685
Time Spent Outside of Home (Hours / Day)	387 [26]	5.341 (3.778)	387 [26]	5.516 (4.339)	396 [26]	5.624 (3.388)	-0.175	-0.283	-0.108
Time Spent doing Self-Employed Work (Hours / Day)	387 [26]	0.241 (1.225)	387 [26]	0.302 (1.194)	396 [26]	0.239 (1.156)	-0.061	0.002	0.064
Time Spent Doing HH Agricultural Work (Hours / Day)	387 [26]	3.142 (3.313)	387 [26]	2.668 (3.617)	396 [26]	3.000 (4.492)	0.474*	0.141	-0.332
Time Spent Doing Paid Work (Hours / Day)	387 [26]	1.008 (2.472)	387 [26]	1.342 (3.689)	396 [26]	1.227 (3.134)	-0.334	-0.219	0.115
Time Spent Doing Chores (Hours / Day)	387 [26]	4.529 (3.670)	387 [26]	4.555 (3.746)	396 [26]	4.362 (2.771)	-0.026	0.167	0.193
PHQ-9 Score (0 to 27)	387 [26]	9.142 (7.385)	387 [26]	9.209 (6.666)	396 [26]	9.750 (6.333)	-0.067	-0.608	-0.541
Life Satisfaction Score (5 to 35)	387 [26]	14.283 (7.414)	387 [26]	13.870 (7.500)	396 [26]	13.624 (6.184)	0.413	0.659	0.246
Female HoH Suffered IPV Abuse	327 [26]	0.587 (0.541)	325 [26]	0.591 (0.598)	318 [26]	0.635 (0.513)	-0.004	-0.048	-0.044
Average # of Shocks Faced	386 [26]	4.288 (2.595)	387 [26]	4.114 (3.670)	396 [26]	4.313 (2.978)	0.174	-0.026	-0.199

Notes: The values displayed for t-tests are the differences in the means across the groups. Standard deviations are clustered at the village level. ***, **, and * indicate significance at the 1, 5, and 10 percent critical level. "N" refers to number of observations. "SD" refers to standard deviation. "HH" refers to household. "PHQ-9" refers to the standard Patient Health Questionnaire, which is used to measure severity of depression. "PPP" refers to purchasing power parity.

Figure 4: Baseline balance – 2

	(1) Control		(2) Standard		(3) Female Only		T-test Difference		
Variable	N/[Clusters]	Mean/SD	N/[Clusters]	Mean/SD	N/[Clusters]	Mean/SD	(1)-(2)	(1)-(3)	(2)-(3)
Agency over Men's Time Use (Index, -1 to 1)	325 [26]	-0.400 (0.515)	317 [26]	-0.412 (0.563)	307 [26]	-0.386 (0.598)	0.012	-0.014	-0.027
Agency over Women's Time Use (Index, -1 to 1)	324 [26]	0.169 (0.343)	313 [26]	0.162 (0.723)	309 [26]	0.204 (0.524)	0.006	-0.035	-0.042
Agency over Consumption (Index, -1 to 1)	327 [26]	0.079 (0.409)	325 [26]	0.123 (0.397)	314 [26]	0.104 (0.358)	-0.044	-0.025	0.019
Women's Attitudes towards Time Use (Index, -1 to 1)	333 [26]	-0.611 (0.442)	331 [26]	-0.608 (0.357)	322 [26]	-0.601 (0.263)	-0.003	-0.010	-0.007
Men's Attitudes towards Time Use (Index, -1 to 1)	202 [26]	-0.616 (0.495)	190 [26]	-0.624 (0.405)	209 [26]	-0.598 (0.496)	0.008	-0.018	-0.026
Women's Attitudes towards Agency over Women's Time Use (Index, -1 to 1)	322 [26]	0.286 (0.422)	312 [26]	0.267 (0.731)	306 [26]	0.335 (0.457)	0.019	-0.048	-0.068
Men's Attitudes towards Agency over Women's Time Use (Index, -1 to 1)	197 [26]	0.137 (0.360)	176 [26]	0.093 (0.499)	203 [26]	0.147 (0.514)	0.043	-0.010	-0.053
Women's PoN towards Time Use (Index, -1 to 1)	333 [26]	-0.601 (0.439)	331 [26]	-0.607 (0.510)	322 [26]	-0.608 (0.268)	0.005	0.006	0.001
Men's PoN towards Time Use (Index, -1 to 1)	202 [26]	-0.645 (0.501)	190 [26]	-0.621 (0.374)	209 [26]	-0.645 (0.358)	-0.024	-0.000	0.024
Women's PoN towards Agency over Women's Time Use (Index, -1 to 1)	333 [26]	0.235 (0.480)	331 [26]	0.222 (0.902)	322 [26]	0.257 (0.593)	0.013	-0.022	-0.035
Men's PoN towards Agency over Women's Time Use (Index, -1 to 1)	202 [26]	0.176 (0.365)	190 [26]	0.177 (0.664)	209 [26]	0.179 (0.611)	-0.001	-0.003	-0.002
Women's PoN of Attitudes towards Time Use (Index, -1 to 1)	333 [26]	-0.617 (0.447)	331 [26]	-0.627 (0.507)	322 [26]	-0.613 (0.238)	0.011	-0.004	-0.014
Women's PoN of Attitudes towards Agency over Women's Time Use (Index, -1 to 1)	333 [26]	0.237 (0.522)	331 [26]	0.239 (0.983)	322 [26]	0.256 (0.595)	-0.002	-0.019	-0.017

Notes: The values displayed for t-tests are the differences in the means across the groups. Standard deviations are clustered at the village level. ***, **, and * indicate significance at the 1, 5, and 10 percent critical level. "N" refers to number of observations. "SD" refers to standard deviation. "PoN" refers to perception of norms.

4.2 RESULTS

23.   Each subheading within this section indicates whether the outcomes are relevant to either the Cash-Based Transfer and Gender (CBT&G) or the Climate and Resilience (C&R) impact evaluation windows, relevant to both windows, or specific to the SMART project. We believe the outcome data concerning shocks and coping strategies may have been negatively affected by COVID-19, as these baseline values are in general worse than what would be expected without the pandemic. The reference period for the baseline survey ranges from one (1) week through to one (1) year preceding the survey, depending on the specific outcome of interest.

4.2.1 DEMOGRAPHICS (CBT&G and C&R)

24.   Due to the impact evaluation's design and inclusion criteria, all 1,170 selected households had a woman in the household who was considered to be "heading" or at least "co-heading" the household. In addition, 84 percent of the 1,170 households in our sample had both male and female heads of household; and as can be seen in Table 3, 82 percent of the female heads of household were married. The average ages of the female and male heads of household were comparable, at 40 and 42 years respectively. Similarly, the average years of education of heads of household were approximately 3.5 years for both men and women. The average household size was five members, with an average of two or more children under the age of 18 years per household. Only 6 percent of the households included elderly members (over the age of 65).

Table 3: Demographics

	Mean	Standard Deviation	N
Panel A: Female head of household			
Age	40.27	12	1,170
Years of education	3.41	2.87	1,170
Panel B: Male head of household			
Age	42.76	12.47	986
Years of education	3.48	2.95	986
Panel C: Household (HH)			
Household size	5.06	1.98	1,170
Number of children (<18)	2.53	1.62	1,170
There is a HH member with a disability	0	0	1,170
There is a HH member with a chronic Illness	0	0	1,170
There is a HH member who is over age 65	0.06	0.28	1,170
Female head of household – marital status			
Single	0.04	0.2	1,170
Married	0.82	0.39	1,170
Divorced / separated	0.05	0.22	1,170
Widowed	0.07	0.26	1,170
Other	0.02	0.14	1,170

Notes: Categorical variables are displayed as "yes/no" variables where a respondent answering "yes" ascribes a value of 1, and "no" a value of 0. Thus the mean value displayed here represents the proportion of the sample that belongs in a given category. For example, according to the table above, we can see that 82 percent of the sampled female heads of household are married.

4.2.2 FOOD SECURITY (CBT&G & C&R)

25.   Food security and nutrition are primary outcome areas due to their immediate and long-term impact on household welfare. Relevant indicators include Food Expenditure Share, Food Consumption Score (FCS), Food Insecurity Experience Scale (FIES), Household Dietary Diversity Score (HDDS), and household food consumption expenditure. The results of these outcomes are presented in Table 4.

26.   The vast majority of the sample, 87 percent of households, spent over 65 percent of their monthly budget on food. This is the WFP standard threshold for "high" Food Expenditure Share based on IFPRI and CARI guidelines. Despite the fact that the Food Expenditure Share in Rwanda is known to be large, it should be noted that these findings likely reflect geography – this sample is more rural than the national average – as well as the impact of the COVID-19 pandemic.

27.   FCS is calculated using the frequency of consumption of different food groups during a seven-day period. A high FCS increases the probability that a household's food intake is adequate. In our sample, 22 percent of households had a "poor" FCS, and 45 percent were "borderline", compared to national averages of 3.8 percent "poor" and 20 percent "borderline" in the same categories from the Government of Rwanda's 2018 Comprehensive Food Security and Vulnerability Analysis (CFSVA). Households were particularly lacking in iron-rich foods, as 85 percent did not consume any in the previous week.

28.   FIES is an index of eight questions capturing food insecurity severity over the preceding 12 months, with yes/no responses (e.g., "In the past 12 months, was there a time when you or others in your household worried about not having enough food to eat because of a lack of money or other resources?"). Results showed 52 percent of respondents reporting moderate food insecurity and 37 percent severe food insecurity over the preceding 12 months.

29.   Finally, HDDS is the sum of different food groups (such as starches, vegetables, dairy, and meat and poultry) consumed by the household during the previous seven days, and it is intended to reflect the ability to access a variety of foods. Households are classified into three groups each with similar patterns (low, medium or high). Only 2 percent of households in the sample consumed a highly diverse and nutritious diet.

30.   As shown in Figures 5 and 6, households in which the female head of household was employed had slightly worse food security and nutrition status compared to those where she was not, including in the consumption of foods rich in protein, iron, and vitamin A. This may suggest households in which the female head is working are generally poorer compared to households in which she is not. We will examine how this difference could be important in the midline and endline data, once the intervention is fully implemented. Since the intervention subject to this impact evaluation is encouraging women to work outside the household, this report regularly displays baseline results disaggregated by employment status.

Table 4: Food security

	Mean	Standard Deviation	N
Food Consumption Score (FCS) – Category			
Poor (0–20)	0.22	0.41	1,170
Borderline (21–34)	0.45	0.5	1,170
Acceptable (35 and over)	0.33	0.47	1,170
Food Consumption Score – Nutrition (FCS–N)			
Vitamin A-Rich Food Consumption	0.15	0.36	1,170
Never consumed			
Consumed sometimes	0.61	0.49	1,170
Consumed at least daily	0.24	0.43	1,170

Protein-Rich Food Consumption	0.23	0.42	1,169
Never consumed	0.52	0.5	1,169
Consumed sometimes	0.25	0.43	1,169
Consumed at least daily			
Hem Iron-Rich Food Consumption			
Never consumed	0.85	0.36	1,169
Consumed sometimes	0.14	0.35	1,169
Consumed at least daily	0.01	0.08	1,169
Household Dietary Diversity Score (HDDS) – Category			
Low dietary diversity	0.74	0.44	1,169
Medium dietary diversity	0.25	0.43	1,169
Good dietary diversity	0.02	0.13	1,169
Food Insecurity Experience Scale (FIES) – Category			
Food secure (0–3)			
Moderate food insecurity (4–6)	0.11	0.31	1,169
Severe food insecurity (7–8)	0.52	0.5	1,169
	0.37	0.48	1,169
Food Consumption Expenditure – Sampled list of goods (2019 PPP USD)	659.52	521.27	1,169
Food Consumption Expenditure – Scaled prediction (2019 PPP USD)	942.17	744.68	1,169
Non-Food Consumption Expenditure – Sampled list of goods (2019 PPP USD)	117.67	113.76	1,169
Non-Food Consumption Expenditure – Scaled prediction (2019 PPP USD)	168.09	162.51	1,169
Food Consumption Expenditure is over 65% of monthly budget	0.87	0.33	1,169

Notes: FCS ranges from 0 to 112. Categories used for FCS: Cereals, grains, roots and tubers; Legumes/nuts; Milk and other dairy products; Meat, fish and eggs; Vegetables and leaves; Fruits; Oil/fat/butter; Sugar. FCS–N Vitamin A-rich foods include: Dairy; Organ meat; Eggs; Orange vegetables; Green vegetables; and Orange fruits. Protein-rich foods include: Legumes; Dairy; Flesh meat; Organ meat; Fish; and Eggs. Hem Iron-rich foods include: Flesh meat; Organ meat; and Fish. FIES ranges from 0 to 8, based on respondents' yes/no answers to eight questions about food insecurity. Values for consumption expenditure were winsorized at 5% and 95%.

Figure 5: Food Consumption Score (FCS)
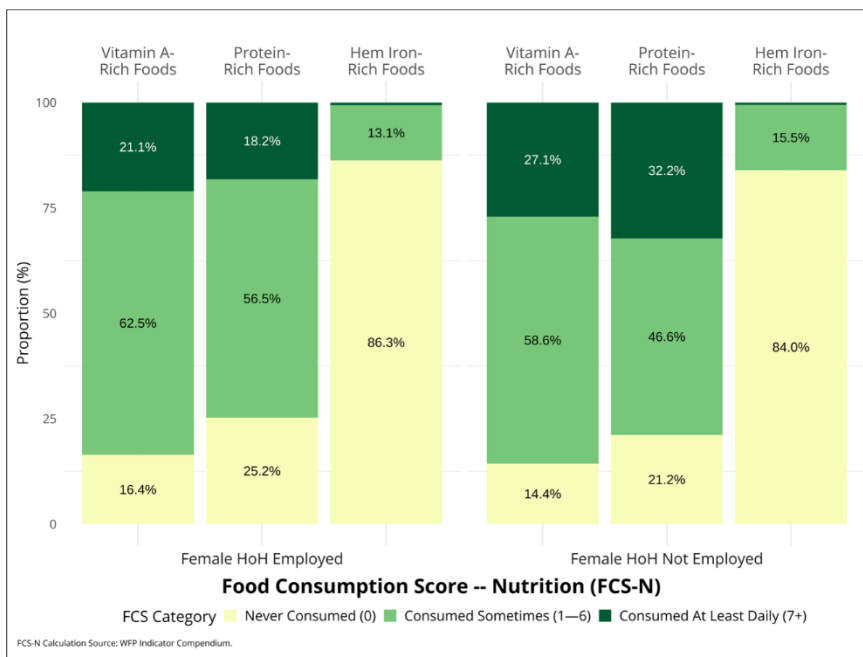
Figure 6: Food Consumption Score – Nutrition (FCS–N)
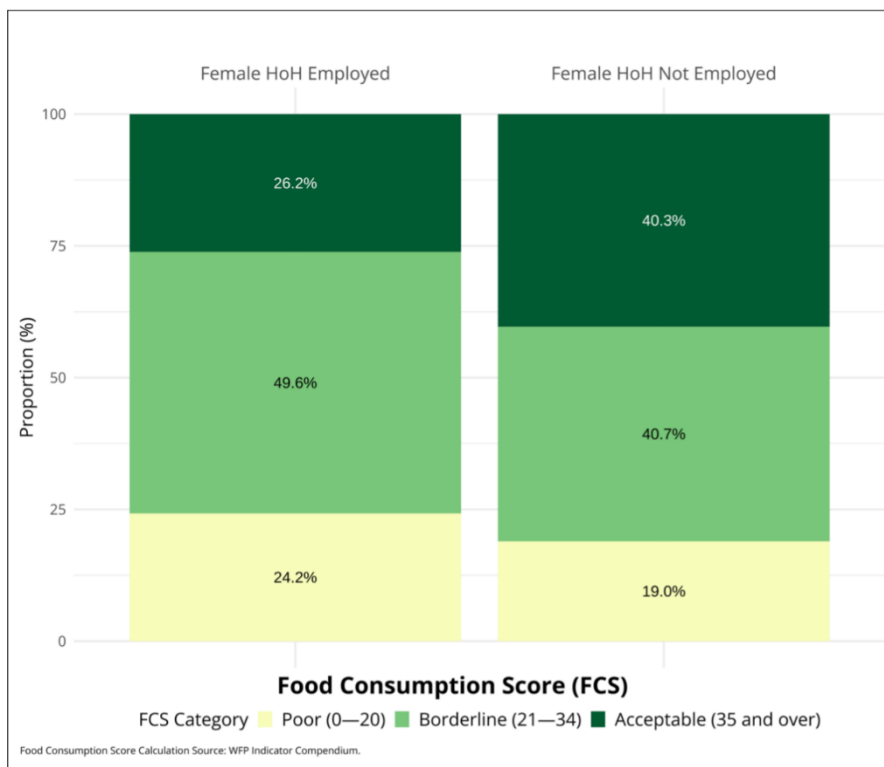
4.2.3 SHOCKS (C&R)

31.   WFP defines "resilience" as the capacity to ensure that shocks and stressors do not have long-lasting adverse development consequences. To capture these capacities, respondents were asked whether their household was negatively affected by a list of 19 predefined shocks in the previous 12 months. As shown in Table 5, 99 percent of households faced at least one shock, with households facing 4.2 shocks on average. The most comparable national average data come from the 2018 CFSVA, which reported that 40 percent of households experienced a shock during the preceding 12 months, which affected their ability to provide food for household members or eat in their usual manner (the question in our survey did not have this condition).

The most common shocks included rising food prices (experienced by 93 percent of households versus 1 percent in the CFSVA), drought/irregular rain (experienced by 70 percent of households versus 41 percent in the CFSVA), and crop pests/diseases (49 percent of households vs. 5% in the CFSVA). Some of the reported shocks could be related to the unusual market conditions of price rises at a five-year high due to the COVID-19 pandemic.

Table 5: Shocks

	Mean	Standard Deviation	N
Household faced a shock in the past 12 months	0.99	0.1	1,169
Average number of shocks faced by household	4.24	2.08	1,169
Household faced the following shocks:			
Drought / irregular rain	0.7	0.46	1,169
Floods	0.2	0.4	1,169
Landslides / erosion	0.38	0.49	1,169
Hail / frost	0.33	0.47	1,169
Crop pests / diseases	0.49	0.5	1,169
Animal diseases	0.23	0.42	1,169
Rise in agricultural input prices	0.32	0.47	1,169
Lower prices for agricultural products	0.1	0.3	1,169
Rising food prices	0.93	0.25	1,169
Serious illness or accident of a household member	0.05	0.21	1,169
Death of a household member	0.3	0.46	1,169
Divorce / separation	0.02	0.15	1,169
Theft of money, property or harvest	0.03	0.16	1,169
Land conflict	0.12	0.32	1,169
Militia group activity	0.03	0.17	1,169
Religious conflict	0	0.05	1,169
Ethnic conflict	0	0.07	1,169
Other significant loss of non-farm household income			
Other shock	0	0.04	1,169
	0.01	0.11	1,169

Notes: Households were asked about 19 shocks as a "yes/no" question. "Yes" take the value 1 and "no", the value 0. The mean value represents the proportion.

Figure 7: Shocks

Shocks Faced by Households
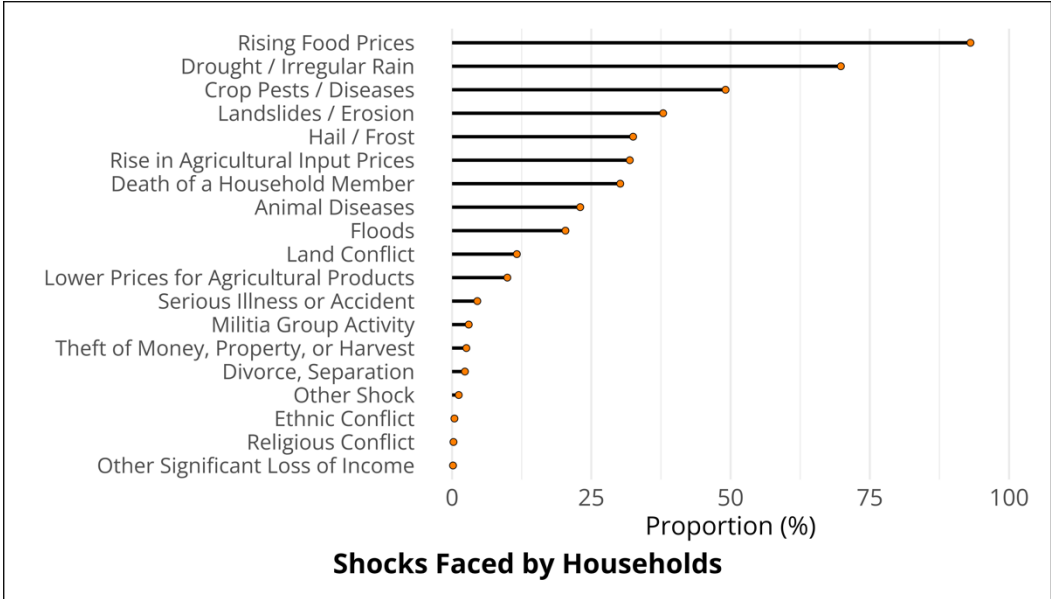
4.2.4 COPING STRATEGIES (C&R)

32.   The livelihood-based coping strategies (LCS) module is used to understand better the longer-term coping capacity of households. These coping strategies help assess longer-term household coping and productive capacities and their future impact on access to essential needs, including food, shelter, health and education. Results on coping strategies are presented in Table 6. In response to shocks experienced, 96 percent of households reported using at least one LCS, which is categorized into four groups based on severity. A "neutral" strategy (reducing food consumption) was reported by 8 percent of households; 51 percent used a "stress" strategy (e.g., borrowing money, selling household assets); 9 percent used a "crisis" strategy (e.g., selling productive assets, selling livestock); and 32 percent used an "emergency" strategy (begging, selling the family house, consuming seed stocks meant for next season's planting). Although households in which the woman was employed fared worse on FCS (see Figure 5), they fared slightly better on the LCS index, as can be seen in Figure 8. At first this may seem counter-intuitive. While there are many possible explanations for this result, we think there is no reason to assume there is a causal connection between FCS and the coping strategies. For instance, it is also possible that there is a trade-off between higher incomes and more diverse sources of income, where diversity is better for coping strategies and higher incomes are better for food security. The Reduced Coping Strategies Index (rCSI), which is used to assess the level of stress faced by households due to food shortage in the preceding 7 days, was not collected at baseline in order to reduce respondent burden. However, it will be presented in reports on subsequent rounds of data.

33.   Recognising the importance of communities' capacity to respond to climate shocks, the Climate Capacity Score (CCS) was included in surveys. The score is calculated by collecting responses to questions in five thematic areas (Climate Services, Climate Resilient Practices, Climate Resilient Assets, Risk Transfer Mechanisms, and Contingency Funding). The CCS provides a score from 0 to 15 for each sampled community, with a score below 5 considered "low", between 5 and 10, "medium", and above 10, "high". Among communities in the sample, 73 percent of communities had a low CCS, 27 percent had a medium score, and 0 percent had a high score. This will be a key indicator to monitor over time. Please refer to Table 16 under Appendix 1 for the classification of coping strategies.

Table 6: Coping strategies

	Mean	Standard Deviation	N
Panel A: Household			
Used livelihood-based coping strategy (LCS)	0.96	0.2	1,170
LCS Category			
Neutral	0.08	0.27	1,170
Used stress coping strategy	0.51	0.5	1,170
Used crisis coping strategy	0.09	0.29	1,170
Used emergency coping strategy	0.32	0.47	1,170
Used consumption-based coping strategy	0.89	0.32	211
Consumption-based (reduced) Coping Strategy Index (rCSI)	13.09	9.49	211
Panel B: Village			
Climate Capacity Score (CCS) Category			
Low CCS	0.73	0.45	78
Medium CCS			

High CCS	0.27	0.45	78
	0	0	78

Notes: rCSI was not included in baseline data collection, so it was calculated from ongoing midline data collection. Livelihood-based and consumption-based coping strategy scores were computed using directions from the WFP Compendium. CCS was computed using directions from the WFP Compendium. CCS was computed at the village level by taking the average of household values for each climate capacity question. A higher value indicates a higher capacity to deal with climate-related crises.

Figure 8: Livelihood coping strategies (LCS)

Livelihood Coping — Severity of Scenarios Faced

Severity of Scenarios Faced ▢ Neutral ▢ Stress ▢ Crisis ▢ Emergency

Categories determined using WFP Indicator Compendium. Households were classified into a "severity group" if they used a coping strategy that would respond to that level of severity.
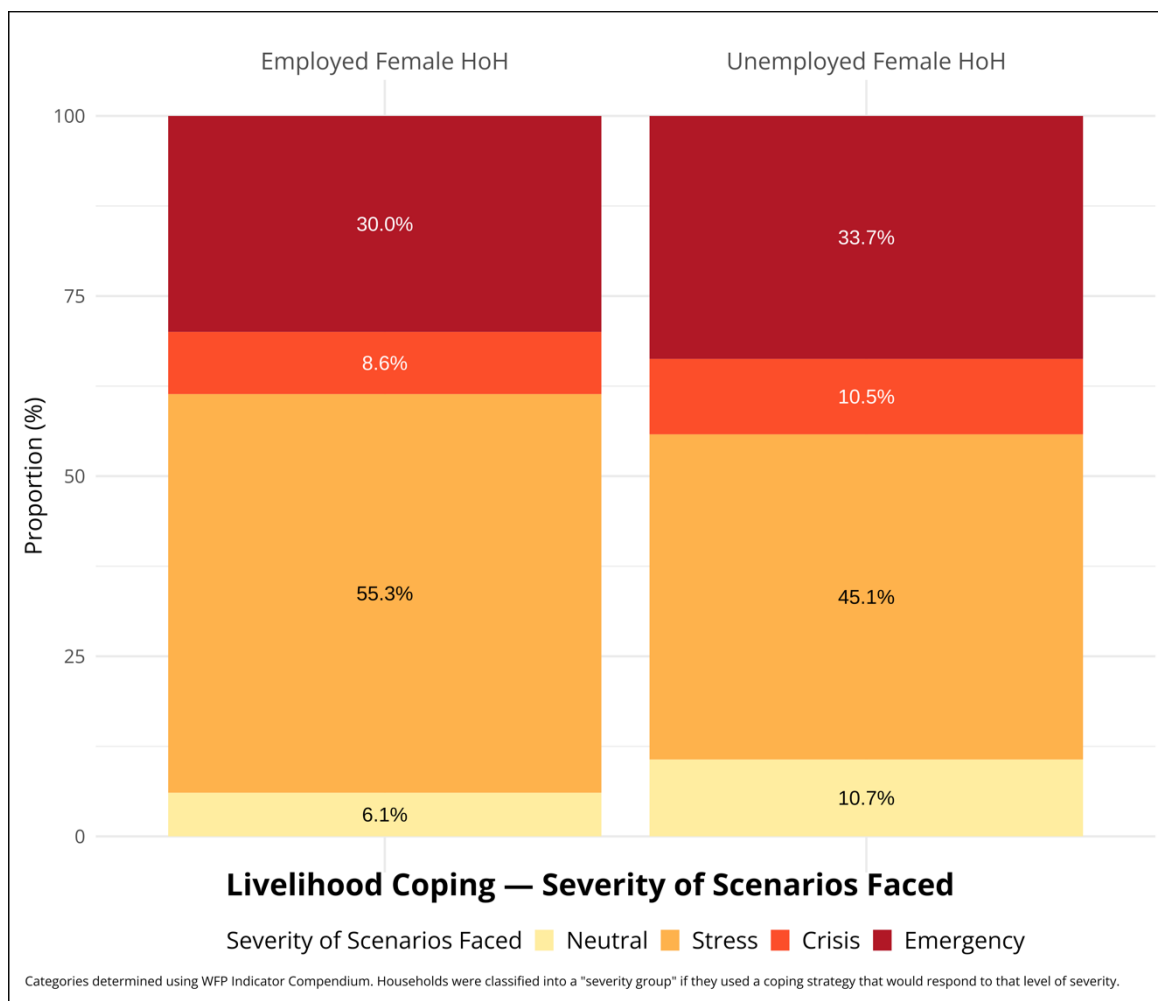
4.2.5 FINANCIAL OUTCOMES (C&R)

34.   Financial activity – savings, loans and sending/receiving transfers – reflect important capabilities of households to withstand shocks and escape poverty, and women often face higher barriers to financial inclusion. Survey respondents were asked about their household's financial activity in the previous 12 months. Of the sample, 58 percent reported making a deposit to a formal savings institution in the preceding 12 months; 32 percent of households applied for a loan, while 12 percent received a transfer from a family member in the previous year. Female heads of household who were employed reported a slightly higher level of savings and loans, yet reported a lower likelihood of receiving transfers, although the differences were small.

Table 7: Financial outcomes

	Mean	Standard Deviation	N
Made deposit in the past 12 months	0.58	0.49	1,165
Total deposit amount (2019 PPP USD)	13.56	17.7	675
Applied for a loan in the past 12 months	0.32	0.47	1,169

| Total credit amount (2019 PPP USD) | 153 | 141.77 | 377 |
| Received a transfer from a family member in the past 12 months | 0.12 | 0.32 | 1,169 |

Notes: PPP values calculated using monthly CPI data from the National Bank of Rwanda and the World Bank's PPP conversion factor for private consumption (most recent value for Rwanda is from 2019). Values were winsorized at the 5th and 95th percentiles.

Figure 9: Financial outcomes
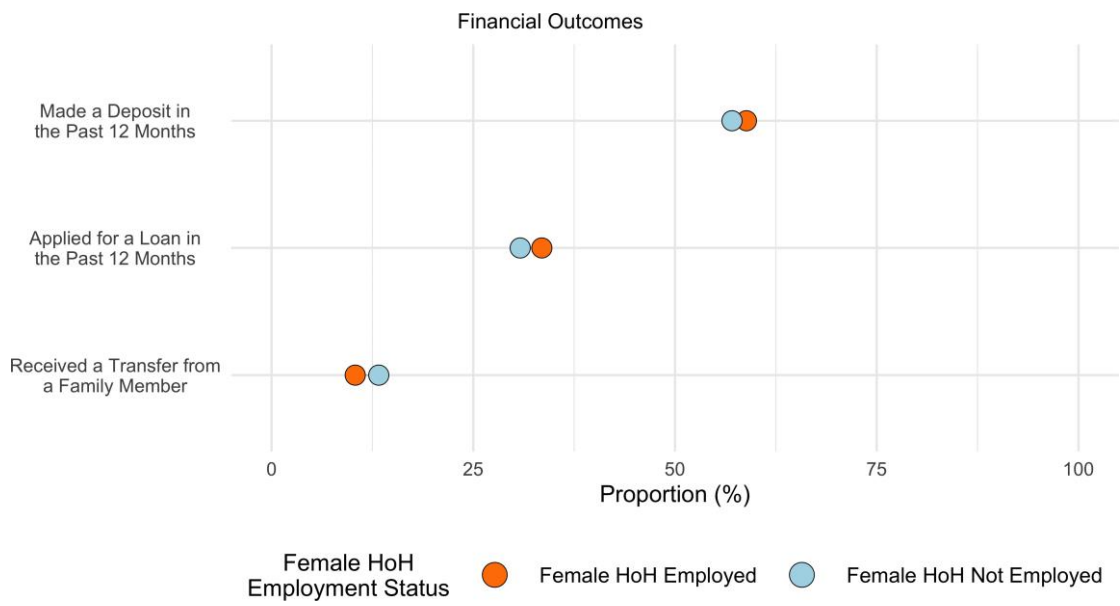
4.2.6 EARNINGS (CBT&G and C&R)

35.   Table 8 presents the mean earnings by household and by gender for the sample. The yearly earnings from wages were higher for men (USD 288.27) compared to women (USD 163.00). The yearly earnings from farming are comparable for both men and women, with women reporting slightly higher earnings (USD 78.97) compared to men (USD 66.41). The yearly earnings from livestock and business are similar across genders, with USD 9.85 and USD 0 for women and USD 13.39 and USD 0 for men[4]. Of the sample, 74 percent reported having at least one household member employed in the previous 12 months. Of the sample, 85 percent of the households reported owning or renting a farm, 78 percent reported renting or owning livestock, while only 5 percent reported they were in non-agricultural business activities, suggesting the sample is predominantly rural.

36.   The yearly mean earnings from wages for households in the sample was USD 487.88, while the yearly mean earnings from farming for households was USD 143.73. In contrast, the yearly mean earnings from livestock and business were much lower at USD 22.88 and USD 0, supporting the above suggestion that the sample is predominantly rural.

37.   Farming, livestock and business earnings were calculated using the following methods: we asked respondents to report profits, household managers and time spent working by individual household members for each endeavour. We then "distributed" profits between household members based on the time they spent working on the farming/livestock/business, up to a daily wage of RwF 700. Past that threshold, any remaining profits were distributed evenly between the household managers.

Table 8: Earnings

	Mean	Standard Deviation	N
Panel A: Female head of household			
Yearly earnings from wages (2019 PPP USD)	163	257.03	1,170
Yearly earnings from farming (2019 PPP USD)	78.97	112.93	1,170
Yearly earnings from livestock (2019 PPP USD)	9.85	44.57	1,170
Yearly earnings from business (2019 PPP USD)	0	0	1,170
Panel B: Male head of household			
Yearly earnings from wages (2019 PPP USD)	288.27	414.55	986
Yearly earnings from farming (2019 PPP USD)	66.41	109.72	986
Yearly earnings from livestock (2019 PPP USD)	13.39	51.32	986
Yearly earnings from business (2019 PPP USD)	0	0	986
Panel C: Household			
At least one HH member employed in the past 12 months	0.74	0.44	1,170
HH owns or rents a farm	0.85	0.36	1,170
HH owns or rents livestock	0.78	0.41	1,170
HH operates a non-agricultural business	0.05	0.21	1,170
HH not involved in any of these four activities	0.02	0.14	1,170
Yearly earnings from wages (2019 PPP USD)	487.88	619.66	1,170
Yearly earnings from farming (2019 PPP USD)	143.73	217.02	1,170

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[4] The business earnings are being zero as all results have been winsorized and less than 1% of the business earnings were not zero.

Yearly earnings from livestock (2019 PPP USD)	22.88	92.33	1,170
Yearly earnings from business (2019 PPP USD)	0	0	1,170

Notes: PPP values calculated using monthly CPI data from the National Bank of Rwanda and the World Bank's PPP conversion factor for private consumption (most recent value for Rwanda is from 2019). Values were winsorized at the 0 and 99th percentiles. Individual earnings from farming, livestock and business were calculated by taking their respective profits and subtracting the value of other household members' labour, splitting the remaining profits between the farming, livestock or business "managers". Value of labour was calculated by attributing profits to each HH member by time spent working, up to a daily median wage of RwF 700. Households that did not possess a given earning source were considered to have earned USD 0 from that source.

4.2.7 AGRICULTURAL PRODUCTIVITY

38.   With 70 percent of the Rwandan population engaged in agriculture (FAO, 2022), and agricultural assets being a focus of the FFA programme, agricultural production is a key outcome indicator. Table 9 shows results of agricultural production. As outlined above, 85 percent of households in the sample owned or rented farmland. While the survey did not ask for crop-by-crop information, across all annual and perennial crops, the average volume of agricultural production in the previous 12 months was 5.9 MT/ha, with an average profit of USD 1.3 per kg (2019 USD PPP).

Table 9: Agricultural productivity

	Mean	Standard Deviation	N
Volume of agricultural production, past 12 months (MT/ha)	5.94	68.18	931
Profit from agricultural production, past 12 months (2019 PPP USD/kg)	1.27	1.3	924
Note: Volume and profit of agricultural production were calculated using the sum of production yields over annual and perennial crops.			

4.2.8 TIME USE (CBT&G and C&R)

39.   An important measure related to agency across genders is how much time is spent on productive activities and chores. By "agency" in this report we refer to the ability to make decisions. A finding in the literature on gender differences in time use is that when women work for a wage, they reduce leisure time. Conversely, when men reduce their wage labour, they do not increase time spent on chores (Hochschild and Machung, 2012; Bertrand et al., 2015). The baseline (see Table 10) shows women spent 4.48 hours per day on chores, while men only spent 1.11 hours per day. The mean time spent outside the home is 7.37 hours for men compared to 5.49 hours for female heads of households – a two-hour difference. Male heads of households similarly spent more time on self-employment and salaried work (with a mean of 0.55 hours and 1.92 hours respectively), while female heads of households spent 0.26 hours and 1.19 hours on self-employment and salaried work respectively. Female heads of households spent 2.94 hours on agricultural work, compared to male heads of households with a mean of 3.49 hours per day.

Table 10: Time use

	Mean	Standard Deviation	N
Panel A: Female head of household			
Time spent outside the home	5.49	2.99	1,170
Time spent working in self-employment	0.26	0.93	1,170
Time spent on HH agricultural work	2.94	2.43	1,170
Time spent working on a salary	1.19	2.2	1,170
Time spent working on chores	4.48	2.14	1,170
Panel B: Male head of household			
Time pent outside the home	7.37	3.53	601
Time spent working in self-employment	0.55	1.51	601

Time spent on HH agricultural work	3.49	2.79	601
Time spent working on a salary	1.92	3.02	601
Time spent working on chores	1.11	1.52	601
Note: All values are in hours.			

40.   Figure 10 suggests the increase in hours spent on chores by women is accompanied by reduced personal time after sunset in comparison to men. It remains to be examined, following programme implementation, how an increase in labour force participation by women in Treatment Group 1 (only women work) will impact the division of time use across genders compared with Treatment Group 2 (both men and women work) and the control group (both men and women work, but with cash transfer only after the endline surveys are complete).

Figure 10: Time use on a typical day
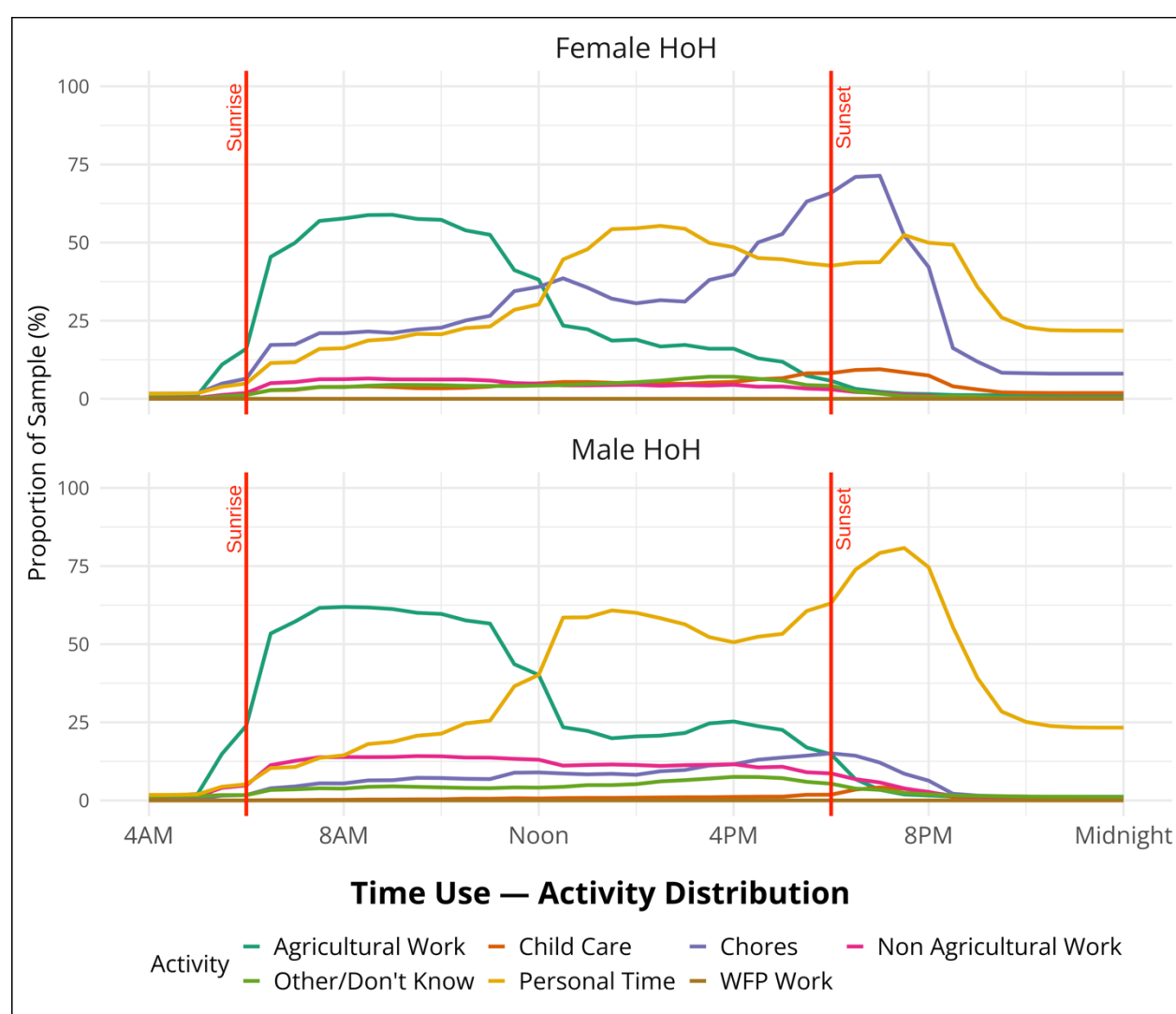

4.2.9 AGENCY DECISION MAKING (CBT&G)

41.   While we do observe differences in time use across genders (see above), it is also important to ask if women have the agency, or power, to decide how they use their time (Lundberg and Pollak, 1993). For instance, can women decide how much time they spend on activities such as self-employed work, salaried work, household chores or leisure?

42.   We asked women who in their households – in their view – actually decides on their time allocation for these activities: the women themselves (the female head of the household), the male head of the household, or both. The responses were then coded as values +1, 0, or -1, respectively. To complete the index, a weighted average across responses is calculated that takes values between -1 and +1, where -1 would suggest the male head of the household has total agency, 1 would suggest the female head of the household has total agency, and 0 would suggest both have equal agency. Please refer to Figure 11 for a pictorial representation.

43.   Table 11 provides the combined index scores, as well as a breakdown by the components.

Figure 11: Index construction
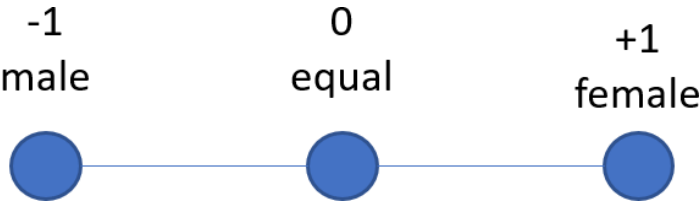
Table 11: Agency

	Mean	Standard Deviation	N
Panel A: Agency over women's time use – index	**0.178**	**0.411**	**946**
Work (Self-employed)	0.061	0.693	981
Work (Paid)	-0.188	0.742	960
Chores	0.656	0.541	985
Leisure	-0.312	0.746	972
Panel B: Agency over men's time use – index	**-0.399**	**0.44**	**949**
Work (Self-employed)	-0.302	0.659	980
Work (Paid)	-0.489	0.614	967
Chores	-0.066	0.855	977
Leisure	-0.632	0.576	971
Panel C: Agency over consumption – index	**0.102**	**0.382**	**966**
HH purchases	0.12	0.711	983
Male HoH purchases	-0.201	0.678	977
Female HoH purchases	0.289	0.603	978
Female HoH health purchases	0.121	0.742	986

Notes: So that we can compare these values, the table displays results only for double-headed households. Each index is created on the basis of questions about the four displayed activities: self-employed work, paid work, chores and leisure. For time-use questions, the respondent was asked who they thought should accomplish each of these activities: the male head of household, the female head of household, or both. The consumption index was based on questions about large household purchases, purchases made using each head of household's income, and the female head of household's healthcare expenses. The indices were constructed using inverse covariance weighting. Values are between -1 and 1, with 1 roughly meaning perception of full agency and beneficial attitudes towards the female HoH and -1 meaning no agency and harmful attitudes towards the female HoH.

44.   Panel A in Table 11 illustrates women's reported agency over women's time use. Figure 12 presents a graphical example of how the index is constructed. The combined index value being positive (an overall index score of 0.178) suggests that over (women's) time use, women have greater agency than men do. This is driven primarily by the score for the chores. While women report greater agency than men over their time use on chores (0.656), they report lower agency over their time use on paid work and leisure (-0.188 and -0.312 respectively).

45.   The weighting approach results in a 41 percent weight for chores and a weight of between 19 percent and 21 percent for each of the remaining three activities because self-employed work, salaried work and leisure time are strongly correlated. The remaining indices in this report are constructed in the same way.

Figure 12: Agency over time use – index

Respondents were asked the questions above for four activities: Self-Employed Work; Salaried Work; Chores; and Leisure. 1 indicates more Female HoH agency, -1 less Female HoH agency over the subject at hand. Indices created using identical inverted covariance weights across the indicators above.
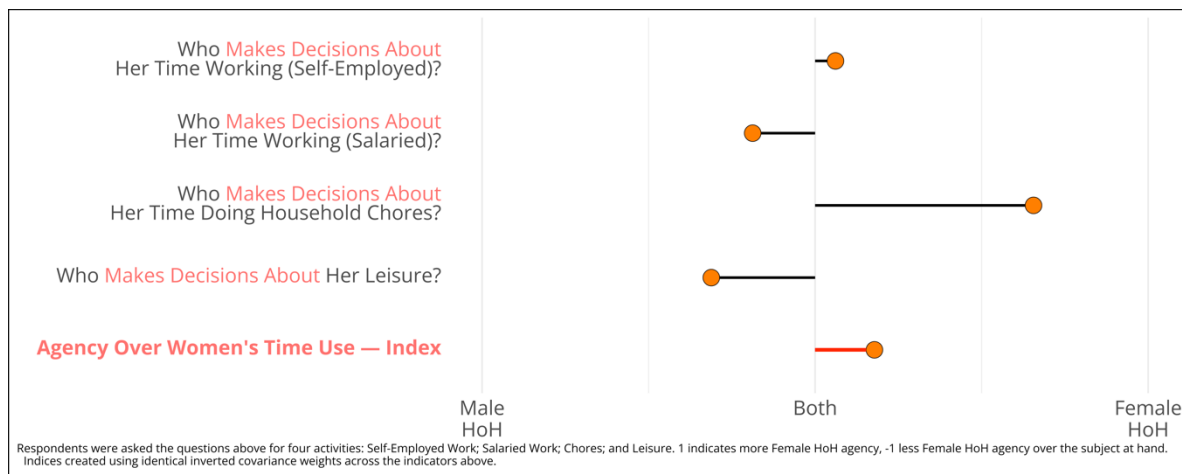
46.   Panel B in Table 11 shows women's reported agency over men's time use. It shows an overall index score of -0.399, which suggests that women reported that men have much greater agency over men's time use on the four listed activities. However, women reported roughly equal agency to men over men's time on chores, with a score of -0.066 (close to zero).

47.   Panel C in Table 11 shows women's agency over consumption decisions. A mean index score of 0.102 for women's agency over consumption suggests that women reported relatively equal agency to men over household purchases.

4.2.10 ATTITUDES (CBT&G)

48.   Having considered *actual time use* (see Section 4.2.8) and *who makes decisions about time use* in their households (see Section 4.2.9), we also wanted to know who men and women think (1) should spend more time and (2) make decisions about time spent on each of the four activities. This can be understood as attitudes towards (1) time use and (2) agency over time use (Dhar et al., 2018). Similar to the above, the index takes values -1 to 1. For attitudes on time use, 1 means that women should spend more time on a particular activity. For agency over time use, 1 means that women should make decisions about time spent on a particular activity.

Table 12: Attitudes

	Mean	Standard Deviation	N
Panel A: Women's attitudes towards time use – index	**-0.639**	**0.297**	**986**
Work (Self-employed)	0.028	0.844	986
Work (Paid)	-0.554	0.715	986
Chores	0.902	0.363	986
Leisure	-0.766	0.532	986
Panel B: Men's attitudes towards time use – index	**-0.631**	**0.356**	**601**
Work (Self-employed)	-0.236	0.773	601
Work (Paid)	-0.601	0.683	601
Chores	0.794	0.497	601
Leisure	-0.684	0.569	601
Panel C: Women's attitudes towards agency over women's time use – index	**0.296**	**0.435**	**940**
Work (Self-employed)	0.209	0.713	981
Work (Paid)	0.005	0.779	959
Chores	0.705	0.542	986
Leisure	-0.151	0.816	967
Panel D: Men's attitudes towards agency over women's time use – index	**0.127**	**0.461**	**576**
Work (Self-employed)	-0.053	0.691	600
Work (Paid)	-0.172	0.72	581
Chores	0.492	0.701	600
Leisure	-0.137	0.79	591

Notes: So that we can compare these values, the table displays results only for double-headed households. Each indicator is an index created on the basis of questions about four activities: self-employed work, paid work, chores and leisure. For time-use questions, the respondent was asked who they thought should accomplish each of these activities: the male head of household, the female head of household, or both. The indices were constructed using inverse covariance weighting. Values are between -1 and 1, with 1 roughly meaning perception of full agency and beneficial attitudes towards the female HoH, and -1 meaning no agency and harmful attitudes towards the female HoH.

49.   Table 12 presents the index value for attitudes towards time use for men and women using an inverse covariance weighting approach similar to the one detailed above.

50.   It is important here to distinguish between the construction of the time-use indices (Panels A and B) and the agency over time-use indices (Panels C and D). The time-use indices weight women spending time on chores negatively, as the time-use gap on chores is generally considered to be detrimental to women (Dhar et al., 2018). The agency over time-use indices, conversely, weight women's decision making over time spent on chores positively, as we consider more agency over these activities beneficial to women.

51.   Panel A displays the overall index for women's attitudes towards time use (-0.639), and Panel B displays men's attitudes towards time use (-0.631), which are both tilted towards men. However, attitudes towards time use varied by activity. For example, women believed that while men should spend more time on paid work and leisure (with mean scores of -0.554 and -0.766), men should spend less time on chores (with a mean score of 0.902). Women believed they should both spend time on self-employed work with a mean score of 0.028 (close to zero). Figure 13 presents the figures of Panel A graphically.

Figure 13: Women's attitudes towards time use – index example
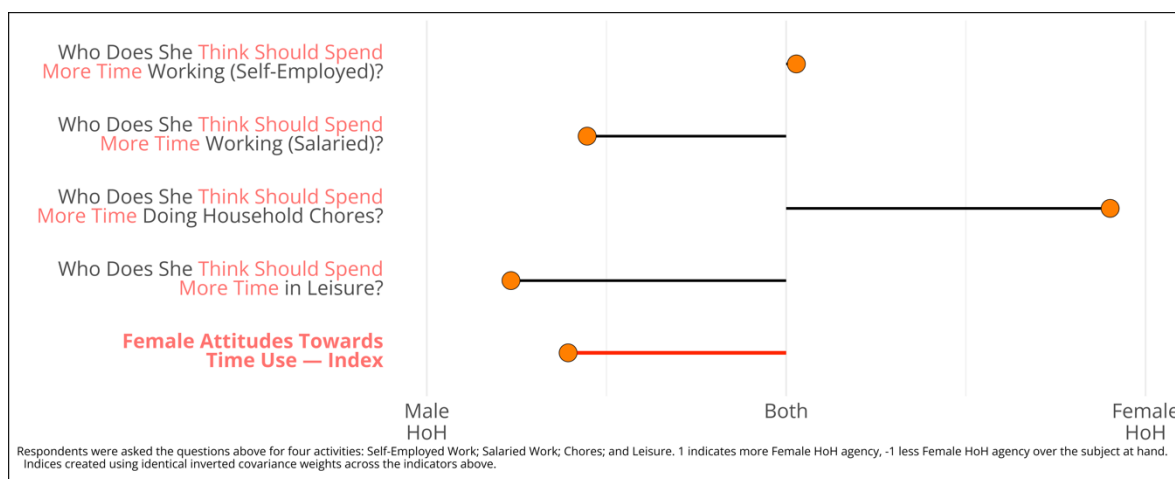
52.   As shown in Table 12, men (Panel B) believed they should spend more time on all activities except chores – all the other activities show negative mean values (-0.236, -0.601 and -0.684). However, with a mean value of 0.794, men believed women should spend more time on chores (in line with women's beliefs).

53.   Panels A and B of Table 12 outline results indicating who should spend time on the listed activities. An equally important question is who women and men think should make decisions pertaining to time use of women on the four activities, which is displayed in Panels C and D of Table 12.

54.   With an overall index value of 0.296 (female respondents) and 0.127 (male respondents), both genders believed most of the decisions about women's time use should be made by women. More specifically, women believed women should make decisions regarding self-employed work and chores (with positive mean values of 0.209 and 0.705), while – although close to zero – women believed men should make decisions about women's leisure (with a mean value of -0.151). Women believed decisions on time use for paid work should be taken by both men and women with a score of 0.005 (close to zero).

55.   Men believed that decisions on women's time spent doing paid work and leisure should be taken by men, with mean values of -0.172 and -0.137, although both numbers are not far from zero. However, they believed women's time use towards chores should be decided by women with a mean value 0.492. Men believed decisions for self-employed work should be taken by both with a score of -0.053 (close to zero).

56.   The breakdown of the different components in Panels C and D suggests that attitudes towards women's agency over work and leisure are highly correlated, with chores as a result taking a larger weight in the main index's construction.

4.2.11 PERCEPTION OF NORMS (CBT&G)

57.   To recap, the previous sections discussed:

- actual time use in their household (Section 4.2.8);

- who makes the decisions on time use in their household (Section 4.2.9);

- attitudes as to who should spend time on tasks (Section 4.2.10, Table 12 Panels A and B); and

- who should have agency to make decisions on time use (Section 4.2.10, Table 12 Panels C and D).

58.   Lastly, perceptions of community norms play an important role in determining women's agency (Beaman et al., 2009; Bursztyn et al., 2018). How people perceive other community members' time use, and agency over time use, may feed into their own decision making. As participation in FFA is expected to increase women's interactions with other members of their community, shifted perceptions of community norms might thus be the mechanism through which household decision making is affected.

Perceptions: Time use in the community

59.   We asked both men and women about perceived time use in the community (their perceptions of community norms) for the four activities. The data is shown in Panels A and B of Table 13.

60.   The weighted index takes values -1 to 1 and represents who (male or female) in the community the respondent believes spends more time on a particular activity. Similar to attitudes over time use (see Section 4.2.10), the "perception of norms of time use" indices negatively weight women spending more time doing chores.

61.   Women (Panel A) believed that men in the community spend more time on paid work and leisure with scores of -0.518 and -0.853. However, they believed women spend more time on chores and self-employed work (with index scores of 0.942 and 0.176). The overall index score is -0.647. Figure 14 presents Panel A graphically.

62.   Men (Panel B) believed men spend more time on self-employed work, paid work and leisure (with index scores of -0.176, -0.597 and -0.764), while women spend more time on chores (with an index score of 0.844 in the community). The overall index score for men's perceptions is -0.661. This data shows that there is a high overlap between the women's and the men's perceptions.
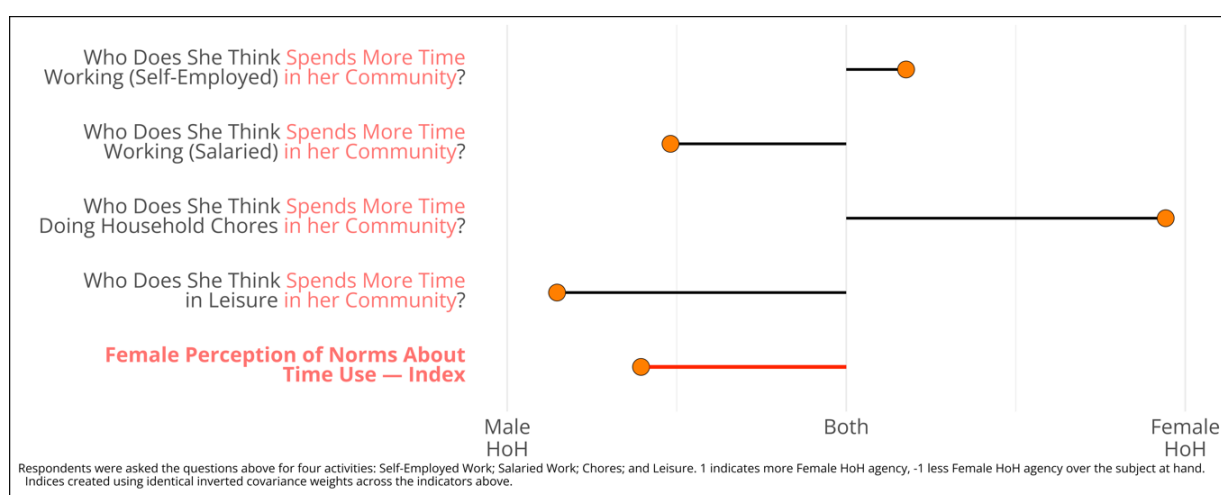
Table 13: Perception of norms

	Mean	Standard Deviation	N
Panel A: Women's perception of norms of time use – index	**-0.647**	**0.271**	**986**
Work (Self-employed)	0.176	0.839	986
Work (Paid)	-0.518	0.734	986
Chores	0.942	0.266	986
Leisure	-0.853	0.427	986
Panel B: Men's perception of norms of time use – index	**-0.661**	**0.316**	**601**
Work (Self-employed)	-0.176	0.81	601
Work (Paid)	-0.597	0.644	601
Chores	0.844	0.453	601
Leisure	-0.764	0.527	601
Panel C: Women's perception of norms of agency over women's time use – index	**0.238**	**0.48**	**986**
Work (Self-employed)	0.112	0.788	986
Work (Paid)	-0.082	0.795	986
Chores	0.692	0.593	986
Leisure	-0.241	0.841	986
Panel D: Men's perception of norms of agency over women's time use – index	**0.177**	**0.5**	**601**
Work (Self-employed)	-0.090	0.758	601
Work (Paid)	-0.148	0.785	601
Chores	0.614	0.651	601
Leisure	-0.133	0.86	601
Panel E: Women's perception of norms of attitudes towards time use – index	**-0.655**	**0.281**	**986**
Work (Self-employed)	0.049	0.825	986
Work (Paid)	-0.525	0.704	986
Chores	0.916	0.328	986
Leisure	-0.832	0.453	986
Panel F: Women's perception of norms of attitudes towards agency over women's time use – index	**0.244**	**0.49**	**986**

Work (Self-employed)	0.095	0.781	986
Work (Paid)	-0.064	0.795	986
Chores	0.688	0.592	986
Leisure	-0.206	0.841	986

Notes: So that we can compare these values, the table displays results only for double-headed households. Each indicator is an index created on the basis of questions about four activities: self-employed work, paid work, chores and leisure. For time-use questions, the respondent was asked who they thought should accomplish each of these activities: the male head of household, the female head of household, or both. The indices were constructed using inverse covariance weighting. Values are between -1 and 1, with 1 roughly meaning perception of full agency and beneficial attitudes towards the female HoH, and -1 meaning no agency and harmful attitudes towards the female HoH.

Figure 14: Women's perception of norms about time use – index example

Respondents were asked the questions above for four activities: Self-Employed Work; Salaried Work; Chores; and Leisure. 1 indicates more Female HoH agency, -1 less Female HoH agency over the subject at hand. Indices created using identical inverted covariance weights across the indicators above.

Perceptions: Decisions about time use in the community

63.   We also asked questions about who the respondents thought made decisions on each of the four activities in the community (Panels C and D of Table 13).

64.   Women believed (Panel C) that women in their community make decisions about their time spent on self-employed work and chores (with index scores of 0.112 and 0.692). Women believed men make decisions on women's leisure in the community (with index score of -0.241). Women believed both men and women make decisions on women's time use for paid work (with an index score of -0.082). The overall index score is 0.238, with work and leisure highly correlated leading to chores having a larger weight. The data on community perceptions of agency over decision making overlaps to a large degree with agency attitudes in their own home (compare Table 11).

65.   Men believed (Panel D) decisions about time use for women's paid work and leisure were made by men in the community (with index scores of -0.148 and -0.133). They believed women make decisions on women's chores in the community (with an index score of 0.614). Men believed decisions on women's time use for self-employed work is made by both (with an index score of -0.090). The overall index is 0.177, and the data show that both genders report similar perceived decision-making patterns for the community.

Perceptions of community attitudes: Who should spend time on activities?

66.   Additionally, women were asked their views regarding community attitudes: who the community thought should spend more time on each of the activities ("perception of community norms of attitudes towards time use")? The results are presented in Panel E of Table 13.

67.   Women thought the opinion in the community is that men should spend more time on paid work and leisure activities (with index scores of -0.525 and -0.832), and women should spend more time on chores (with an index score of 0.916). Women also believed the community opinion is that both men and women should spend about equal time on self-employed work (with an index score of 0.049). The overall weighted index

score is -0.655.

68.   An interesting comparison of Panel E in Table 13 is with Panel A of Table 12. The perceptions regarding their own home and what they observe in the community are almost identical.

Perceptions of community attitudes: Who should make decisions on time use?

69.   Lastly, women were asked about who the community thinks should make decisions about time use. The results are presented in Panel F of Table 13. Women believed the opinion in the community is that women should make decisions about their time spent on chores (with an index score of 0.688). Women thought the opinion in the community is that men should make decisions on women's time use for leisure (with an index score of -0.206). Women believed the opinion in the community is that both genders should make decisions on self-employed work and paid work (with scores of 0.095 and -0.064, which are both close to zero). The overall index score is 0.244.

70.   An interesting comparison here is between Panel F of Table 13 and Panel C of Table 12, which shows a large overlap in their views on their household and perceived community norms.

4.2.12 WELL-BEING (CBT&G and C&R)

71.   A significant aspect of agency is understanding whether the respondents have a perceived sense of control over their life; whether they are able to initiate actions. This is referred to as "locus of control". Table 14 shows results for locus of control, depression and life satisfaction.

72.   The data collection used an adaptation of the "Rotter Scale" (Rotter, 1966), asking the respondents numerous questions on their perceived control. On a scale from 0 to 10, the higher the score, the lower the perceived sense of control they feel over their life. We find the locus of control to be approximately 5.21 and 4.82 among women and men respectively (on a scale from 0 to 10, where 0 is high control and 10 is low control). Women and men feel approximately equal, with women scoring slightly higher. As shown in Figure 15, households in which the female head was employed had higher locus of control scores (thus lower control).

73.   The survey measured depression using the Patient Health Questionnaire (PHQ-9). We see high levels of moderately severe and severe depression across both genders within the sample households to which food insecurity and low ability to cope with shocks could be a contributing factor. Among the women, 42 percent reported moderate, moderately severe or severe depression, compared to 26 percent of men. In addition, as shown in Table 14, using the "Perceived Stress Scale" (Cohen, Karmack and Mermelstein, 1983), 95 percent of women reported they were either moderately or highly stressed. Lastly, 57 percent of women reported they experience dissatisfaction or extreme dissatisfaction towards life (following the measure developed by Diener et al., 1985).

Table 14: Well-being

	Mean	Standard Deviation	N
Panel A: Female head of household			
Locus of control score	5.21	1.73	1,170
Stress Score Category			
Low stress	0.05	0.22	1,170
Moderate stress	0.64	0.48	1,170
High stress	0.31	0.46	1,170
Patient Health Questionnaire (PHQ-9) Category			
Minimal depression	0.15	0.36	1,170

Mild depression	0.42	0.49	1,170
Moderate depression	0.27	0.45	1,170
Moderately severe depression	0.12	0.33	1,170
Severe depression	0.03	0.18	1,170
Life Satisfaction Score Category			
Extreme dissatisfaction	0.23	0.42	1,170
Dissatisfaction	0.34	0.48	1,170
Below average satisfaction	0.2	0.4	1,170
Average satisfaction	0.13	0.34	1,170
High satisfaction	0.07	0.26	1,170
Very high satisfaction	0.02	0.14	1,170
Panel B: Male head of household			
Locus of control score	4.82	1.8	601
Patient Health Questionnaire (PHQ-9) Category			
Minimal depression	0.24	0.43	601
Mild depression	0.5	0.5	601
Moderate depression	0.19	0.39	601
Moderately severe depression	0.06	0.24	601
Severe depression	0.01	0.11	601

Notes: Stress data and life satisfaction data were not collected from male heads of household. Locus of control score was calculated using Rotter (1966), ranging between 0 and 10. A higher locus of control score implies a feeling of less control over one's environment. Stress score was calculated using the "Perceived Stress Scale" from Cohen, Kamarck and Mermelstein (1983). Depression score was calculated using the standard Patient Health Questionnaire (PHQ-9). Life satisfaction score was calculated using Diener et al. (1985).

Figure 15: Locus of control

Locus of Control calculated using Rotter (1966). A higher Locus of Control score implies a belief in an external locus of control and that the respondent believes that they have less control over events in their life.

Figure 16: Mental health
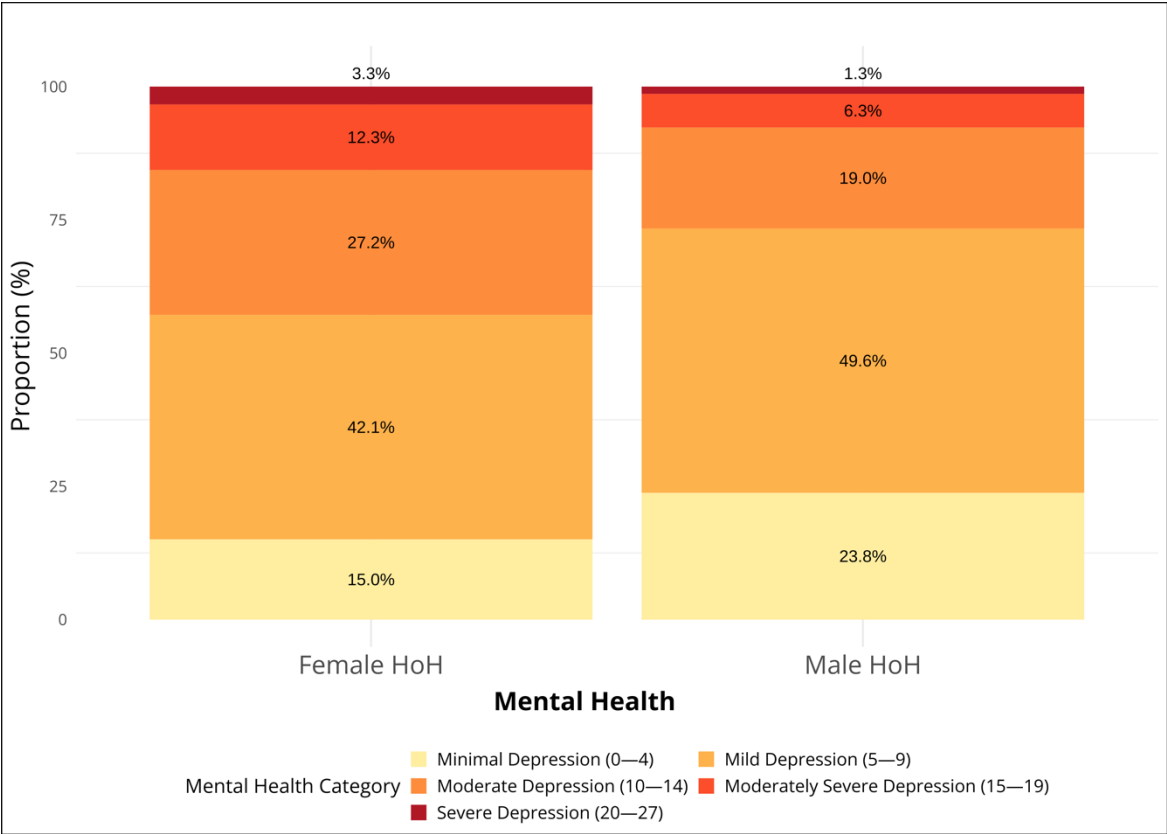
4.2.13 INTIMATE PARTNER VIOLENCE (CBT&G)

74.   Some evidence shows that women with limited agency and from poorer households can often be disproportionately affected by intimate partner violence (IPV). As Haushofer et al. (2019) have argued, improvements in economic outcomes of the household, such as receiving cash transfers, can reduce IPV, which is why the baseline survey sought to capture a measure of incidents.

75.   It must be noted that because data collection on IPV involves raising sensitive questions that require respondents to recollect trauma, all efforts were made to ensure the interviewers were trained in this regard. A half-day training on how to approach sensitive questions about gender-based violence–intimate partner violence (GBV–IPV) was provided to the enumerators by a Gender and Protection Officer from the WFP country office. If the respondent reported a case of IPV, they had to follow a strict protocol that included providing a set of referral services, such as Isange One stop centres and district health centres.

76.   As shown in Table 15, 60 percent of women reported having suffered any one type of abuse. Among the women interviewed, 57 percent reported psychological abuse, 23 percent reported physical abuse and 18 percent reported sexual abuse. The figures on physical and sexual abuse are very high and also comparable to baseline figures, for example in Haushofer et al. (2019), from Kenya. Table 15 and Figures 22, 23 and 24 (in the Appendix) present the individual percentages for each of type of abuse, and the proportion of the sample that has experienced them. The literature suggests that an improvement in the empowerment of women within the household can help alleviate women from such abuses. It will be important to see if the SMART programme has an impact on these outcomes.

Table 15: Intimate partner violence (IPV)

	Mean	Standard Deviation	N
Suffered any of the below abuses	**0.6**	**0.49**	**970**
Psychological abuse	0.57	0.49	970
Physical abuse	0.23	0.42	970
Sexual abuse	0.18	0.38	970
Note: These questions were asked to female heads of household who reported being in an active relationship at the time of the survey.			

5. Challenges and Conclusions

5.1 CHALLENGES

77.   While the execution of the impact evaluation and the baseline survey have gone well, there have been challenges to the process that need to be kept in mind as they may influence how we interpret the results from the endline survey. Firstly, the assignment of sample households includes a few land owners of the sites where the Food Assessment for Assets (FFA) programme will be implemented. As they are the land owners, the project will not be able to stop them from participating in the programme in the control group. However, they constitute a very small segment of the control group and the risk of any weighted influence on results is extremely low. Secondly, there is a risk that better-paying outside work options may come up during the time of the intervention for participating households. This could lower our anticipated participation rates. We will be working with the project teams to ensure mobilization is taking place successfully to anticipate such possibilities. Additionally, it so happened that the project team had to reassign new SCOPE identification numbers to beneficiaries after the sampling and random group assignment process. This caused a problem as the identification numbers initially did not match between the baseline survey and the newly assigned SCOPE IDs. While we were able to overcome this problem by matching with national identification numbers, we still lost out on a small fraction of the sample due to unsuccessful matches. Lastly, while the impact evaluation is focused only on households with male and female household heads, there are other single-headed household participants in the SMART programme who are not included in the study. This implies that the impact evaluation results will be applicable only to these double-headed households. Since this type of household structure constitutes a large proportion of all project households, this should not be a major concern.

5.2 CONCLUSIONS

78.   Even with the caveats listed above, the data confirm that the cross-community randomization of mixed FFA and women's FFA, the sampling, and the baseline survey itself were successfully implemented. This is important to ensure that the impact evaluation can deliver rigorous estimates of the short-run and medium-run impacts of mixed FFA and women's FFA on a broad range of outcomes associated with resilience, women's economic empowerment and household well-being. Ongoing monitoring will continue to ensure fidelity of implementation and low rates of attrition from the baseline survey.

79.   Under the Cash-Based Transfers and Gender (CBT&G) impact evaluation window, this evaluation will explore how FFA activities can promote gender equality and women's empowerment (GEWE) through engaging women in work outside the home. Intra-household gender inequality in the sample is substantial, which is both an important issue to address in itself as well as instrumental to households' economic outlooks. The baseline data shows that women have relatively limited agency over their time use (potentially explained by both attitudes within the household and societal norms), earn 70 percent of what male heads of household earn, spend more time on chores, and spend 26 percent less time outside the home. Women also frequently reported being subject to psychological and physical intimate partner violence (IPV) and experience high rates of depression (both in absolute terms and relative to men).

80.   The focus of the Climate and Resilience (C&R) impact evaluation window is to understand how resilience programming can best ensure that vulnerable populations have improved and sustained access to adequate and nutritious food. The data show that targeted households are highly vulnerable and experienced high levels of food insecurity, low levels of food consumption, and diets lacking in nutritional diversity. Real annual household consumption in the sample was USD 1,166, well below international poverty thresholds at just USD 0.60 per capita per day. Wage labour represents 74 percent of household income, and 41 percent of households reported relying on emergency or crisis coping strategies. The descriptive analysis highlights the potential of resilience programming to impact households' livelihoods and well-being, since reliable sources of income from public works and diversified livelihoods from asset creation activities may meaningfully increase household resilience.

81.   Following the timeline set out in the Impact Evaluation Inception Report, next steps for the evaluation include midline (ongoing) and endline data collections (ca. Q3 2022), as well as high-frequency surveys which aim to capture the dynamics of resilience over time. An endline report will be produced exploring the causal impacts of the SMART programme on women's empowerment, as well as households' livelihoods and sustained well-being.

References

Beaman, L., Chattopadhyay, R., Duflo, E., Pande, R. & Topalova, P. 2009. Powerful Women: Does Exposure Reduce Bias? *The Quarterly Journal of Economics*, 124(4): 1497–1540.

Bertrand, M., Kamenica, E. & Pan, J. 2015. Gender Identity and Relative Income within Households. *The Quarterly Journal of Economics*, 130(2): 571–614.

Bursztyn, L., González, A. L. & Yanagizawa-Drott, D. 2018. Misperceived Social Norms: Female Labor Force Participation in Saudi Arabia. Technical report, National Bureau of Economic Research.

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A Global Measure of Perceived Stress. Journal of Health and Social Behavior, 24, 385-396.

Dhar, D., Jain, T. & Jayachandran, S. 2018. Reshaping Adolescents' Gender Attitudes: Evidence from a School-based Experiment in India. Technical report, National Bureau of Economic Research.

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale.

DIME–OEV 2022. Impact Evaluation of Cash-Based Transfers on Food Security and Gender Equality in El Salvador: An Inception Report. Technical report, World Bank Group/World Food Programme.

Food and Agricultural Organization of the United Nations, 2022 https://www.fao.org/rwanda/our-office-in-rwanda/rwanda-at-a-glance/en/#:~:text=Agricultural%20sector%20general%20information,working%20population%20employed%20in%20agriculture.

Haushofer, J., Ringdal, C., Shapiro, J. P. & Wang, X. Y. 2019. Income Changes and Intimate Partner Violence: Evidence from Unconditional Cash Transfers in Kenya. Working Paper 25627, National Bureau of Economic Research.

Hochschild, A. & Machung, A. (2012). *The Second Shift: Working Families and the Revolution at Home*. New York, Penguin.

Lundberg, S. & Pollak, R. A. 1993. Separate Spheres Bargaining and the Marriage Market. *Journal of Political Economy*, 101(6): 988–1010.

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. Psychological monographs: General and applied, 80(1), 1.

WEF 2021. Global Gender Gap Report 2021, www3.weforum.org/docs/WEF_GGGR_2021.pdf.

WFP 2018. Rwanda Comprehensive Food Security and Vulnerability Analysis, www.wfp.org/publications/rwanda-comprehensive-food-security-vulnerability-analysis-december-2018.

Appendix

Table 16: Coping strategy classification

Strategy	Classification
Reduced food consumption	Neutral
Purchased food on credit or borrowed food Borrowed money Sold household assets or goods Reduced household expenditures	Stress
Sold productive assets or means of transport Sold livestock Sold food stock	Crisis
Consumed seed stocks that were to be held/saved for the next season Sold a house or land Begged	Emergency

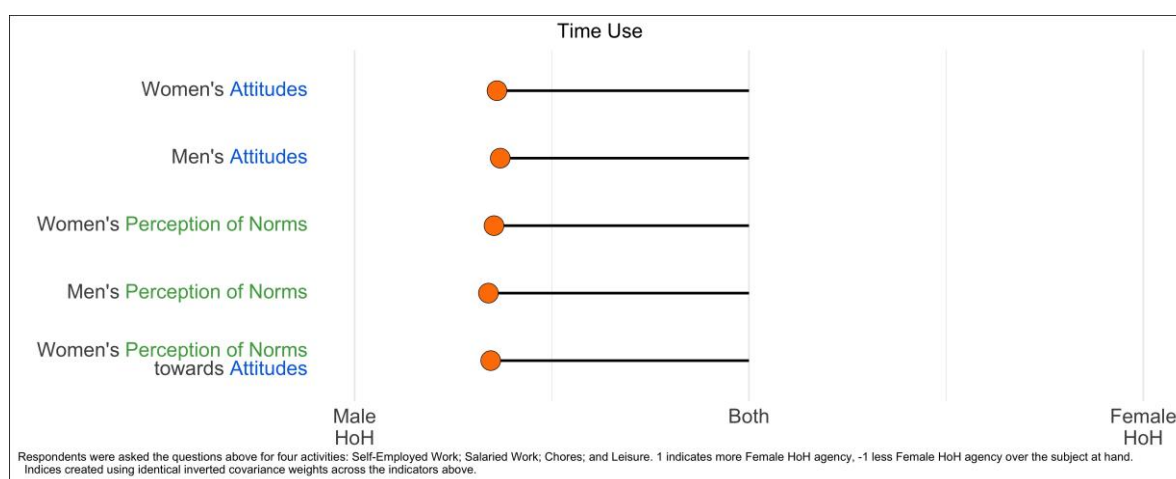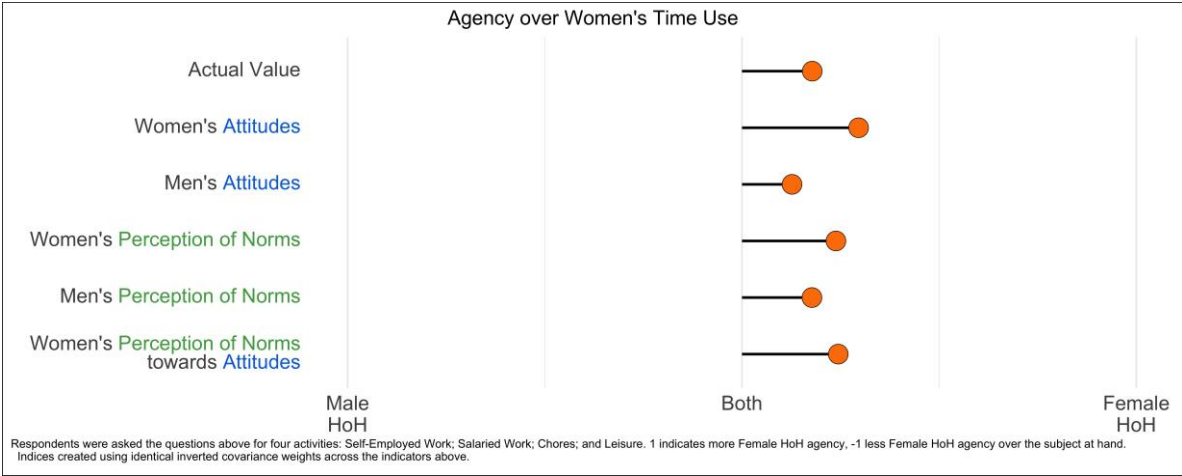**Figure 17: Attitudes and perceptions of norms – time use**

Figure 18: Attitudes and perceptions of norms – agency over women's time use

Agency over Women's Time Use

	Male HoH	Both	Female HoH
Actual Value			
Women's Attitudes			
Men's Attitudes			
Women's Perception of Norms			
Men's Perception of Norms			
Women's Perception of Norms towards Attitudes			

Respondents were asked the questions above for four activities: Self-Employed Work; Salaried Work; Chores; and Leisure. 1 indicates more Female HoH agency, -1 less Female HoH agency over the subject at hand. Indices created using identical inverted covariance weights across the indicators above.
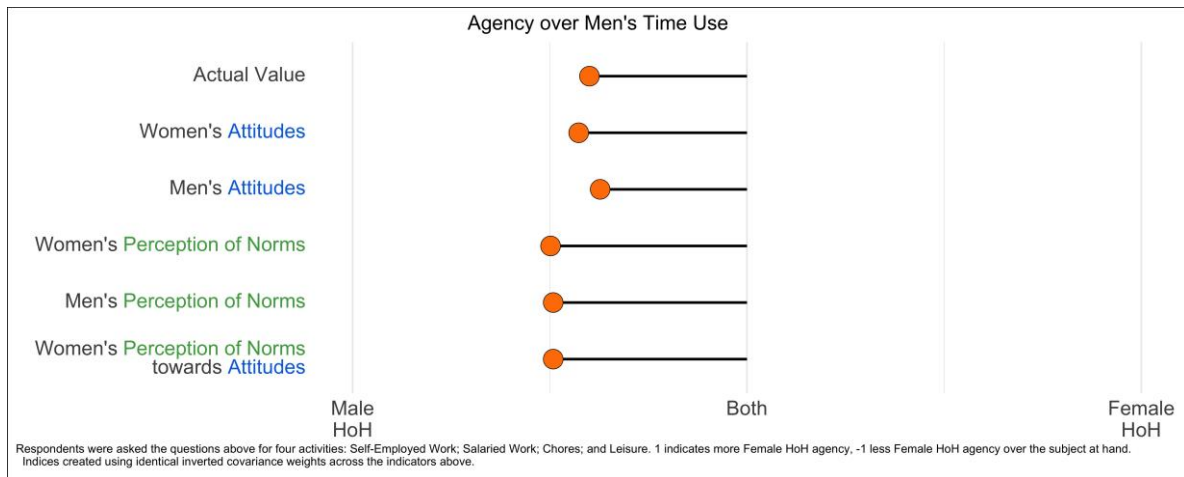
Figure 19: Attitudes and perceptions of norms – agency over men's time use

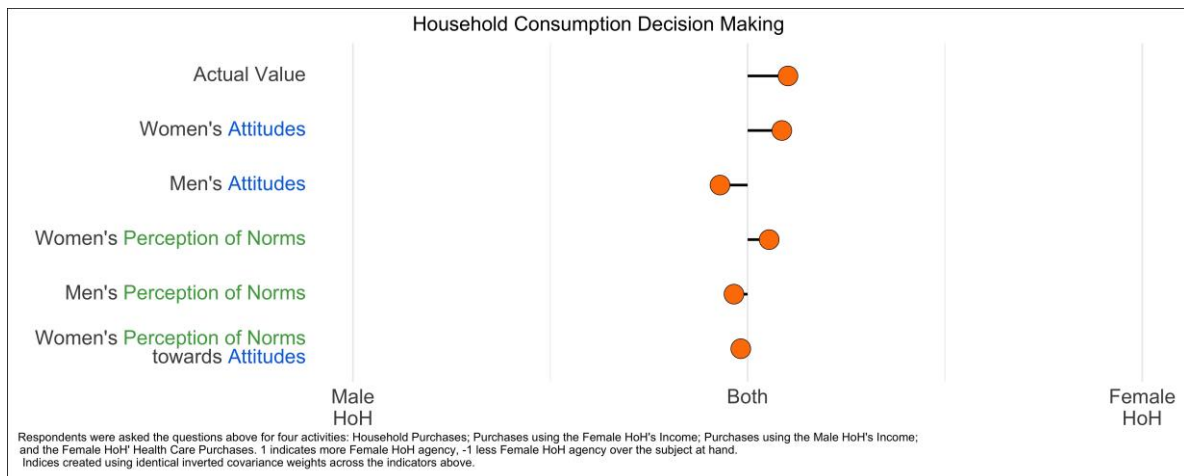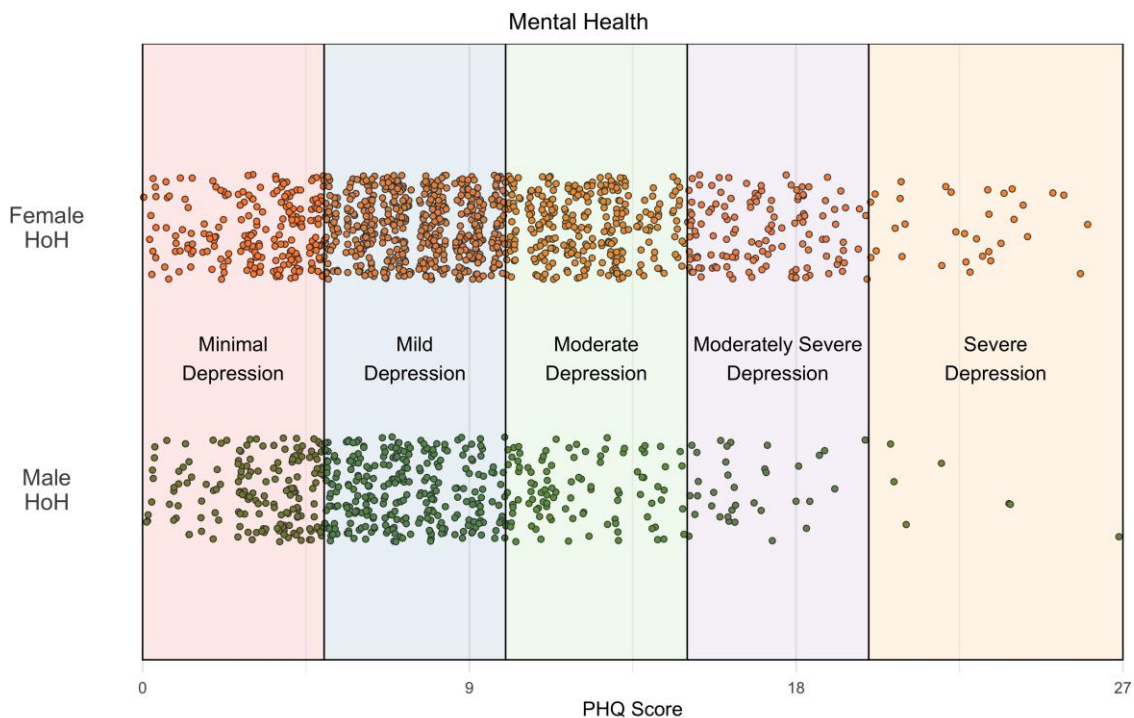**Figure 20: Attitudes and perceptions of norms – household consumption**

Figure 21: Mental health

Mental Health

Measured and calculated using the Patient Health Questionnaire (PHQ-9). Respondents are asked how often they have experienced problems related to depression in the past two weeks. A higher score indicates a higher level of depression.
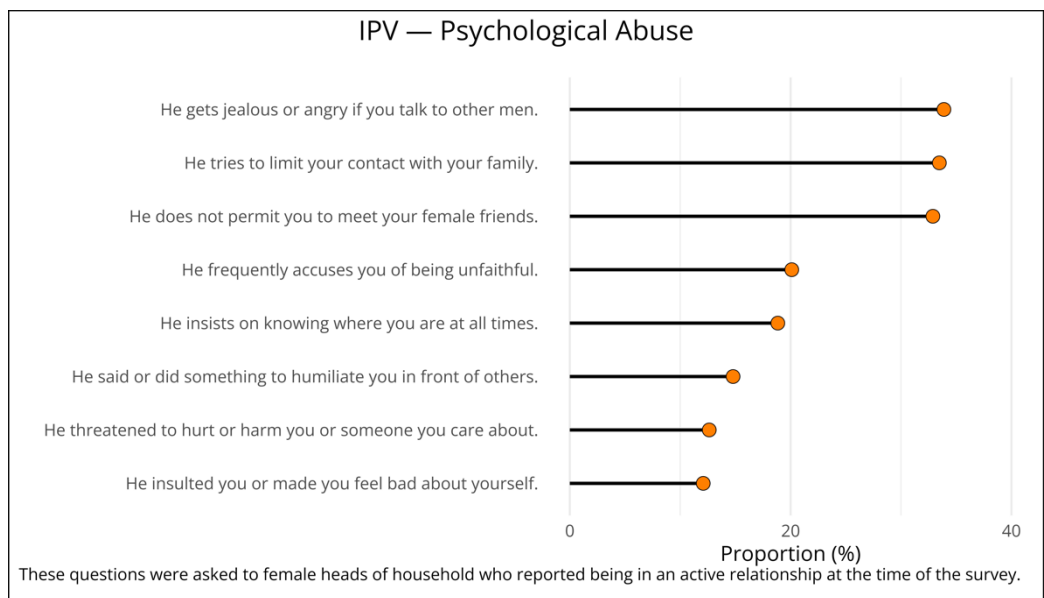
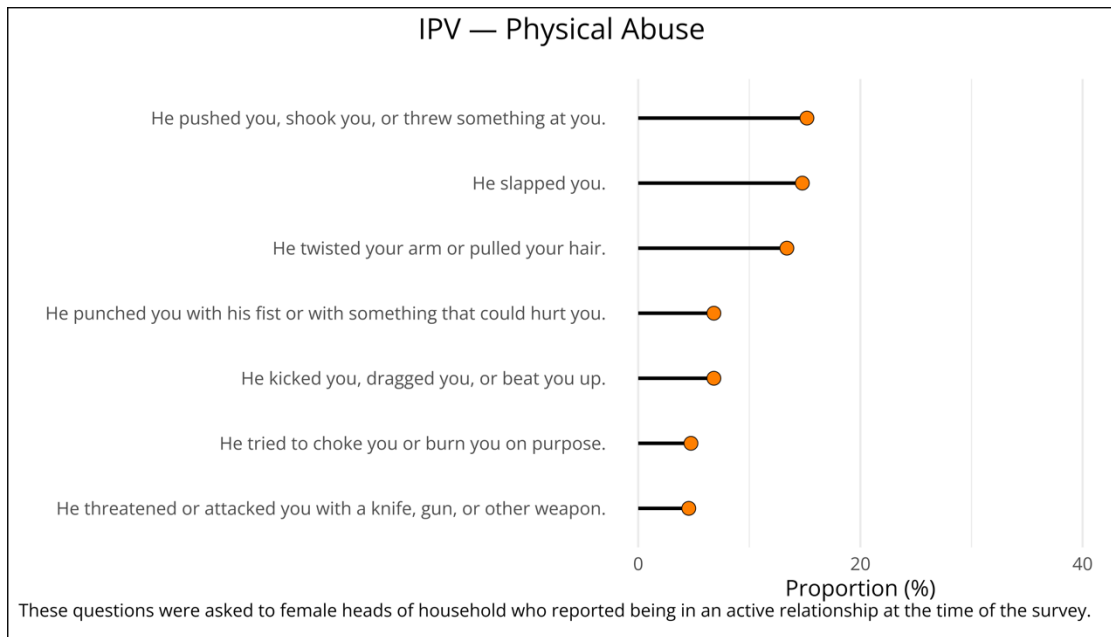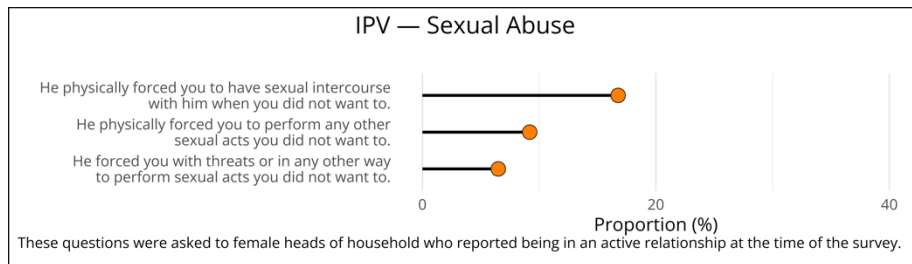## Figure 22: IPV – psychological abuse

IPV — Psychological Abuse

These questions were asked to female heads of household who reported being in an active relationship at the time of the survey.

Figure 23: IPV – physical abuse

IPV — Physical Abuse

He pushed you, shook you, or threw something at you.

He slapped you.

He twisted your arm or pulled your hair.

He punched you with his fist or with something that could hurt you.

He kicked you, dragged you, or beat you up.

He tried to choke you or burn you on purpose.

He threatened or attacked you with a knife, gun, or other weapon.

Proportion (%)

These questions were asked to female heads of household who reported being in an active relationship at the time of the survey.

Figure 24: IPV – sexual abuse

IPV — Sexual Abuse

He physically forced you to have sexual intercourse with him when you did not want to.

He physically forced you to perform any other sexual acts you did not want to.

He forced you with threats or in any other way to perform sexual acts you did not want to.

Proportion (%)

These questions were asked to female heads of household who reported being in an active relationship at the time of the survey.

Acronyms

C&R	Climate and Resilience Impact Evaluation Window
CBT&G	Cash-Based Transfers and Gender Impact Evaluation Window
CCS	Climate Capacity Score
CFSVA	Comprehensive Food Security and Vulnerability Analysis
DIME	Development Impact Evaluation
FAO	Food and Agricultural Organisation
FCS	Food Consumption Score
FCS–N	Food Consumption Score – Nutrition
FFA	Food Assistance For Assets
FIES	Food Insecurity Experience Scale
GEWE	Gender Equality and Women's Empowerment
HDDS	Household Dietary Diversity Score
HFPS	High Frequency Phone Surveys
HH	Household
HoH	Head of the Household
IPV	Intimate Partner Violence
LCS	Livelihood-based Coping Strategies
PHQ	Patient Health Questionnaire
PPP	Purchasing power parity
rCSI	Reduced Coping Strategies Index
RCT	Randomized Control Trial
SCOPE	WFP's beneficiary information and transfer management platform
SMART	Sustainable Market Alliance and Asset Creation for Resilient Communities and Gender Transformation project
WEF	World Economic Forum
WFP	World Food Programme