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Women's Empowerment and Dietary Diversity: Differential Impacts of Agency

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Hampshire College
2016

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An abstract of
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Abstract

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The relationship between women's empowerment and nutritional outcomes is understudied and the limited existing research has produced mixed results. This study's aim was to further assess the relationship between empowerment and nutritional status using the recently developed project-level Women's Empowerment in Agriculture Index (pro-WEAI). The pro-WEAI uses Kabeer's (1999) empowerment framework in which resources enable women to have agency (the ability to make decisions), through which outcomes such as improved nutritional status can be achieved. The pro-WEAI serves as a standardized empowerment measurement tool and assesses components of women's empowerment across three sub-domains of agency: intrinsic (power within), instrumental (power to), and collective (power with). Cross-sectional data was collected on women's empowerment, women's dietary diversity, as well as household and individual demographic characteristics. A multi-level, mixed effects linear regression model was used to assess the relationship between women's empowerment (including individual sub-domains of agency) and women's dietary diversity (measured using the Minimum Dietary Diversity-Women, 10 food-group indicator). Results indicated that intrinsic agency was positively associated with dietary diversity (β=0.14; 95% CI 0.02 – 0.26). The intrinsic agency sub-domains that contributed to this association were finding intimate partner violence not acceptable (β=0.32; 95% CI 0.04 – 0.59) and possessing autonomy in income (β=0.27; 95% CI 0.04 – 0.51). Women's overall empowerment score, as calculated using the pro-WEAI, was not associated with dietary diversity. These findings suggest a relationship between women's agency and women's dietary diversity and highlight that sub-domains of women's empowerment may differentially correlate to women's dietary diversity, even when overall empowerment may not. Further research should prioritize women's nutritional status as an outcome of interest and continue to refine empowerment measures such as the project-level Women's Empowerment in Agriculture Index to elucidate the true nature of this relationship.

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I. ABSTRACT

The relationship between women's empowerment and nutritional outcomes is understudied and the limited existing research has produced mixed results. This study's aim was to further assess the relationship between empowerment and nutritional status using the recently developed project-level Women's Empowerment in Agriculture Index (pro-WEAI). The pro-WEAI uses Kabeer's (1999) empowerment framework in which resources enable women to have agency (the ability to make decisions), through which outcomes such as improved nutritional status can be achieved. The pro-WEAI serves as a standardized empowerment measurement tool and assesses components of women's empowerment across three sub-domains of agency: intrinsic (power within), instrumental (power to), and collective (power with). Cross-sectional data was collected on women's empowerment, women's dietary diversity, as well as household and individual demographic characteristics. A multi-level, mixed effects linear regression model was used to assess the relationship between women's empowerment (including individual sub-domains of agency) and women's dietary diversity (measured using the Minimum Dietary Diversity-Women, 10 food-group indicator). Results indicated that intrinsic agency was positively associated with dietary diversity (β=0.14; 95% CI 0.02 – 0.26). The intrinsic agency sub-domains that contributed to this association were finding intimate partner violence not acceptable (β=0.32; 95% CI 0.04 – 0.59) and possessing autonomy in income (β=0.27; 95% CI 0.04 – 0.51). Women's overall empowerment score, as calculated using the pro-WEAI, was not associated with dietary diversity. These findings suggest a relationship between women's agency and women's dietary diversity and highlight that sub-domains of women's empowerment may differentially correlate to women's dietary diversity, even when overall empowerment may not. Further research should prioritize women's nutritional status as an outcome of interest and

continue to refine empowerment measures such as the project-level Women's Empowerment in Agriculture Index to elucidate the true nature of this relationship.

II. BACKGROUND

Women's and Children's Undernutrition

While substantial progress has been made in reducing food insecurity in the past 50 years, women's and children's undernutrition remains prevalent in low- and middle-income countries (LMICs) (Victora et al., 2021). The global prevalence of low Body Mass Index (BMI) (less than 18.5 kg/mg^2) among women has declined from 14.6% in 1975 to 9.7% in 2014 (NCD-RisC, 2016). However, low BMI in south Asia has remained elevated at 24% (NCD-RisC, 2016). Additionally, in south and southeast Asia, the prevalence of short stature (height less than 150 cm), an indicator of chronic undernutrition, for women ranges between 40% and 70% as of 2015 (Kozuki et al., 2015).

Impacts of undernutrition for women and girls are severe, and can lead to poor cognitive development for children, intergenerational short stature, fetal losses, fetal growth restriction, and other poor reproductive and birth outcomes (Victora et al., 2021). Short stature is further associated with long-term consequences including reduced school achievement, limited work capacity, and adverse pregnancy outcomes (Victora et al., 2008). The pattern prominent in many developing countries is that infant girls born with low birth weight (LBW) continue to experience stunted growth during childhood and even into adolescence (Ramakrishnan, 2004). These women are also more likely to have children at an early age, which further limits their opportunity to reach an optimal stature with adequate nutrient stores before conception, leading to the birth of a second generation of LBW infants (Ramakrishnan, 2004; Victora et al., 2008).

The cyclical nature of women's and children's undernutrition make it a pressing global health issue to address, especially in south Asia where the health impacts of undernutrition remain severe.

The etiology of stunting is complex and could be due to a lack of food, monotonous diets lacking micronutrients, as well as frequent infections (Rah et al., 2010). Accurate information about dietary patterns, food intake, and micronutrient adequacy is difficult to obtain because of the cost and complexity of macro- and micro-nutrient intake data (Arimond et al., 2010). Simple proxy measures are needed to characterize and evaluate population micronutrient adequacy to assess dietary quality issues and recognize population subgroups at risk of consuming inadequate diets (Arimond et al., 2010). Dietary diversity measures have been developed to identify the number of food groups consumed over a recent period of time and have been widely recognized as capturing a key dimension of diet quality (Arimond et al., 2010). Previous research has demonstrated dietary diversity's importance as an indicator of dietary quality (Hatløy et al., 1998; Torheim et al., 2004). Even in developing countries where monotonous diets relying on a few plant-based staple foods are common, available studies support the association between dietary diversity and nutrient adequacy (Arimond et al., 2010; Diop et al., 2021; Roche et al., 2008; Torheim et al., 2004).

Nutrition adequacy has been operationalized differently in many of these studies, but the relationship between micronutrient intake and dietary diversity have been consistent, suggesting that this relationship is robust (Arimond et al., 2010). To fulfill this need for a population-level proxy for micronutrient adequacy, the MDD-W was developed. This measure was designed to be sensitive to the nutritional needs of women of reproductive age, who have enhanced nutritional needs due to the physical demands of pregnancy and lactation (FAO, 2016). Micronutrient

adequacy is captured by this indicator through consumption of 15 grams or more of ten food groups in the past 24-hours (FAO, 2016). Although efforts have been made to measure micronutrient deficiency more accurately, the causes of women's and children's undernutrition remains difficult to address due to underlying socio-economic influences.

Social factors such as low education, limited household assets, and early marriage, are consistently associated with stunting, wasting, and other forms of undernutrition for women and children (Akombi et al., 2017; Van Malderen et al., 2019; Victora et al., 2021). In south Asia, low social status of women is thought to play a particularly meaningful role in the region's unusually high rate of women's and children's undernutrition (Vir, 2016). For Bangladesh in particular where the prevalence of underweight and stunting is among the highest in the region, a complex set of social determinants continue to influence women's underweight status and macronutrient deficiencies (Hasan et al., 2017). Although advances in food production have lowered the prevalence of undernutrition for Bangladeshi women in the past 10 years, low dietary intake and inequitable distribution of food within households contribute to the chronicity of women's undernutrition (Hasan et al., 2017; Zahangir et al., 2017). Women in Bangladesh often eat last and the least in a family, and women of low socioeconomic status in particular are vulnerable to insufficient nutrition, frequent illness, and lack of access to health facilities (Harris-Fry et al., 2017).

The Role of Women's Empowerment in Undernutrition

Higher levels of gender inequity have been associated with increased acute and chronic undernutrition (Klugman, 2011; Mucha, 2012). Existing studies on empowerment in agriculture consistently demonstrate women's lack of access to and control over land, capital, and

agricultural technology (Fletschner & Kenney, 2014). Evidence also suggests that women have unmanageable workloads, lack access to credit, and hold low decision-making power (Alkire et al., 2013). In Bangladesh especially, women's role in agriculture is often underrecognized, due to the commonly held view that women are not involved in agricultural production, especially outside of the household (Rahman, 2000). In an effort to support women and agriculture, donor agencies, local governments, and non-profit organizations are increasingly focusing on women as intended beneficiaries and aiming to empower women to reduce gender inequity (French Gates, 2014).

Interest in reducing gender equity has led to the study of women's empowerment and its impact on health outcomes. The complex nature of women's empowerment makes it a difficult construct to measure (Akter et al., 2017). The Women's Empowerment in Agriculture Index (WEAI) was established as the first comprehensive and standardized measure to assess women's empowerment in the context of agriculture and was jointly developed by the United States Agency for International Development (USAID), the International Food Policy Research Institute (IFPRI), and the Oxford Poverty and Human Development Initiative (OPHI) for the US Government's Feed the Future initiative (Alkire et al., 2013). The WEAI is a survey-based index reported at the household level in which individual-level data is collected by interview from men and women in the same household (Akter et al., 2017). The WEAI also includes multiple sub-indices and indicators which can provide their own unique information (Malapit et al., 2019). Since its inception, the WEAI has been used to measure empowerment in 13 countries in 5 regions of the world (Malapit et al., 2019). The index has also been used to study the relationship between women's empowerment and child's nutrition, although the relationship between

women's empowerment and women's own nutrition continues to be understudied (Malapit & Quisumbing, 2015).

The original WEAI was developed to monitor the Feed the Future initiative at a population level (Malapit et al., 2019). Since then, demand has risen for a standardized and validated measure of women's empowerment that can be useful for agriculture and development projects to assess their gender equity impact (Malapit et al., 2019). Demand has also risen for outcome indicators that are able to detect unintended consequences that could result from women's participation, such as backlash from men as a result of an intervention that aims to empower women or from the increased amount of time needed for women to participate in an intervention (Malapit et al., 2019). In response to this need, the project-level Women's Empowerment in Agriculture Index (pro-WEAI) was built to expand upon the WEAI by including more explicit connections to empowerment theory (Malapit et al., 2019). It was also adapted to be more sensitive to changes which could be seen over the course of a project (Malapit et al., 2019). The pro-WEAI was developed collaboratively with 13 agricultural development projects in Africa and south Asia as a part of the Gender, Agriculture, and Assets Project, Phase 2 (GAAP2) (Malapit et al., 2019).

The pro-WEAI was derived from Kabeer's framework of empowerment, in which empowerment is conceptualized as a process of change in the related dimensions of resources, agency, and achievements (Kabeer, 1999). The pro-WEAI focuses on domains of agency thought to be impacted by a nutrition-sensitive agriculture program and measures the ability of an individual to make strategic choices (Malapit et al., 2019). The index focuses on agency for both practical and conceptual reasons (Malapit et al., 2019). Conceptually, agency can be considered a more direct measure of empowerment, compared to resources and achievement, which could

exist even in situations for which women are extremely disempowered (Malapit et al., 2019).

Additionally, current survey methods for capturing resources and achievements are typically part

of impact assessments (i.e., measures vary according to the programs' theories of change and

include various aspects of social and human capital and wellness outcomes). There are very few

measures of agency that are standardized and validated widely across locations and contexts

(Malapit et al., 2019). Kabeer (1999) describes empowerment as a process in which resources

enable women to have agency (the ability to make decisions), through which outcomes such as

improved nutritional status can be achieved (Figure 1). The pro-WEAI serves as a standardized

empowerment measurement tool and assesses components of women's empowerment across

three sub-domains: intrinsic agency (power within), instrumental agency (power to), and

collective agency (power with) (Malapit et al., 2019).

Figure 1. Kabeer's conceptualization of the process of empowerment

Adapted from (Martinez & Seymour, 2018)

Current Literature

Women in low-income households are at the greatest risk of being food insecure and are more likely to be involved in the agriculture sector as wage laborers (Sraboni et al., 2014). Rahman (2010) demonstrated that female agriculture workers contribute significantly to productivity, but experience gender bias in the agricultural labor market. Women's ability to generate income in agriculture is severely limited by lack of ownership and control over physical and human capital (Sraboni et al., 2014). The rationale for researching empowerment in agriculture is rooted in a large body of empirical evidence that demonstrates the ways in which women are essential to improving household nutrition (Sraboni et al., 2014). It is therefore necessary to continue to research the role empowerment plays in improving the nutritional status of women and their households. Literature conducted to date, however, has overwhelmingly been focused on the role of women's empowerment on child's nutrition (Black & Kowalski, 2021; Cunningham, Ploubidis, et al., 2015; Cunningham, Ruel, et al., 2015; Essilfie et al., 2020; Heckert et al., 2019; Holland & Rammohan, 2019; Jones et al., 2019; Rah et al., 2010; Santoso et al., 2019) and has neglected measuring impacts on women's nutrition itself.

Research Objective and Aims

The aim of this study is to fill this gap in the literature by examining the relationship between women's empowerment and women's nutritional status in Bangladesh. The objective is to examine the association between women's empowerment, as measured through the pro-WEAI, and dietary diversity, as measured through MDDW-10, to determine: (1) whether overall empowerment score is a predictor of women's dietary diversity, and (2) how sub-domains of agency and individual indicators of empowerment contribute to this hypothesized association.

The hypothesis is that enhanced empowerment (through enhanced agency) will be associated with increased dietary diversity such that women who experience increased levels of agency will achieve higher nutrient-rich diets.

III. METHODS

Study Design

This cross-sectional study was nested in the Food and Agricultural Approaches to Reducing Malnutrition (FAARM) project, a four-year (2015-2019) cluster-randomized controlled trial designed to evaluate the impact of a homestead food production (HFP) intervention on women's and children's nutritional status in Bangladesh (Wendt et al., 2019). FAARM was funded by the German Federal Ministry for Education and Research (BMBF) and led by the University of Heidelberg; the HFP intervention was implemented by Helen Keller International. In 2015, FAARM enrolled over 2,700 married women in 96 rural settlements of Bangladesh to participate in the trial (Wendt et al., 2019). Covariate-constrained randomization was used to assign 48 settlements to receive a three-year HFP intervention and the other 48 settlements to receive birth and breastfeeding counselling, serving as a control (Wendt et al., 2019). The intervention included training women's groups and distributing assets (seeds, gardening equipment etc.) to support year-round gardening, poultry rearing, and improved nutrition practices (Wendt et al., 2019). Additional details about the FAARM study design and HFP intervention are available elsewhere (Wendt, 2019). Cross-sectional data was collected upon conclusion of FAARM on women's empowerment, women's nutritional status, as well as household and individual demographic characteristics.

Study Population

Intervention and control settlements involved in the FAARM trial were located in the Habiganj district in Sylhet division of Bangladesh (Wendt et al., 2019). Sylhet division has a prevalence of undernutrition above that of Bangladesh's country average, with 44% of children under five stunted and 40% of pregnant women undernourished as of 2014 (HKI & JPGSPH, 2016). This study area was identified though analysis of population demographics, results from national nutrition surveys, as well as information from other local interventions (Wendt et al., 2019). Women interested in the HFP intervention, aged 30 years or less, married with a husband that stayed overnight in the household at least once in the year prior to interview, and with access to at least 40 square meters of land were eligible for enrollment (Wendt et al., 2019). Settlements (the randomization unit) were then formed with between 10 and 65 eligible women based on the geographical location of their residences (Wendt et al., 2019). After a baseline survey, 96 settlements were randomly assigned to either the intervention or control group (Wendt et al., 2019). Covariate constrained randomization was used to ensure baseline characteristics did not differ significantly between the groups; additional details of this process are available elsewhere (Lorenz & Gabrysch, 2017).

Data Sources and Sampling

Data for this thesis came from two quantitative surveys: one conducted as part of the GAAP2 sub-study in April-May 2019 and another conducted with the larger FAARM study population in October 2019-January 2020. Of the 480 women targeted for GAAP2, 457 women were interviewed using the pro-WEAI survey. Of these 457 women who participated in GAAP2, dietary diversity data was collected and consolidated using the MDD-W (FAO, 2016) for 450 of

the women for whom FAARM study data was also available. Prior to this study's data collection, a week-long training was held for all data collectors (Wendt et al., 2019). This training involved reviewing survey question content, question-asking techniques, and cultural sensitivity (Wendt et al., 2019). Data were collected and reviewed at the end of each day of data collection; datasets were examined for quality and refresher trainings with the data collectors were completed as needed (Wendt et al., 2019).

Data Measures

Exposure

Empowerment was measured in the GAAP2 survey using pro-WEAI indicators, which cover intrinsic, instrumental, and collective agency (Figure 2). The domain of intrinsic agency included questions about intimate partner violence, autonomy in income, self-efficacy, and respect among household members.

Figure 2: Domains and indicators of the pro-WEAI

Agency domain	Indicator
Intrinsic	Intimate partner violence not acceptable
	Autonomy in income
	Self-efficacy
	Respect among household members
Instrumental	Access to and decisions on financial services
	Ownership of land and other assets
	Input in productive decisions
	Control over use of income
	Visiting important locations
	Work balance
Collective	Group membership
	Membership in influential groups

Adapted from (Malapit et al., 2019)

Instrumental agency encompassed questions on input into productive decisions, ownership of land and other assets, control over use of income, access to and decisions on financial services, work balance, and visiting important locations. Collective agency was measured by assessing group membership and membership in influential groups.

Respondents were classified as having either adequate (1) or inadequate (0) agency for each of the 12 indicators by comparing their responses with a given threshold (Figure 3) (Malapit et al., 2019). Each indicator was equally weighted to create an aggregate empowerment score out of 12.

Figure 3: Definitions of adequacy for the pro-WEAI

Indicator	Definition of adequacy
Intimate partner violence not acceptable	Believes husband is NOT justified in hitting or beating his wife in all 5 scenarios: 1) She goes out without telling him 2) She neglects the children 3) She argues with him 4) She refuses to have sex with him 5) She burns the food
Autonomy in income	More motivated by own values than by influence of others' disapproval: 1) Uses income as personally thinks is right OR 2) Does NOT say they use income as people say they should or told them to
Self-efficacy	"Agree" or greater on average with self-efficacy questions: *New Generalized Self-Efficacy Scale* score>=32
Respect among household members	Meets ALL of the following conditions related to their spouse, the other respondent, or another household member: 1) Respondent respects relation (MOST of the time) AND 2) Relation respects respondent (MOST of the time) AND 3) Respondent trusts relation (MOST of the time) AND 4) Respondent is comfortable disagreeing with relation (MOST of the time)
Access to and decisions on financial services	Meets at least ONE of the following conditions: 1) Belongs to a household that used a source of credit in the past year AND participated in at least ONE sole or joint decision about it

	2) Belongs to a household that did not use credit in the past year but could have if wanted to from at least ONE source
Ownership of land and other assets	Owns, either solely or jointly, at least ONE of the following: 1) At least THREE assets (poultry, nonmechanized equipment, or small consumer durables) 2) Land
Input in productive decisions	Meets at least ONE of the following conditions for ALL of the agricultural activities they participate in 1) Makes related decision solely, 2) Makes the decision jointly and has at least some input into the decisions 3) Feels could make decision if wanted to (to at least a MEDIUM extent)
Control over use of income	Has input in decisions related to how to use BOTH income and output from ALL of the agricultural activities they participate in AND has input in decisions related to income from ALL non-agricultural activities they participate in, unless no decision was made
Visiting important locations	Meets at least ONE of the following conditions: 1) Visits at least TWO locations at least ONCE PER WEEK of [city, market, family/relative], or 2) Visits least ONE location at least ONCE PER MONTH of [health facility, public meeting]
Work balance	Works less than 10.5 h per day: Workload = time spent in primary activity + (1/2) time spent in childcare as a secondary activity
Group membership	Active member of at least ONE group
Membership in influential groups	Active member of at least ONE group that they perceive to influence the community to at least a MEDIUM extent

Adapted from (Malapit et al., 2019)

Outcome

Dietary diversity was measured in the larger FAARM survey by asking women about their food consumption in the past day using a 24-hour recall method, as described elsewhere (Sinharoy et al., 2018). Open recall was followed by list-based probes, and when a woman reported consuming a food item, data collectors asked whether she had consumed more or less than a spoonful to approximate whether she had consumed at least 15 grams of the food throughout the day (Sinharoy et al., 2018). Responses were then aggregated into a continuous

score using the standardized MDDW-10 indicator (FAO, 2016). The 10-Food Group Indicator

captured starches, nuts and seeds, dairy, meat, eggs, dark green leafy vegetables, vitamin A-rich

fruits and vegetables, as well as other fruits and other vegetables that were consumed in a

quantity greater than 15 grams a day (FAO, 2016).

Covariates

The covariates assessed in this study were treatment (participation in FAARM's HFP

intervention), wealth, education, and religion. Treatment was categorized as a binary variable

based on women's involvement in the larger FAARM study. Wealth was measured as a relative

quintile and was incorporated into analyses as a categorical variable. Education was measured as

a continuous variable for number of class years completed. Lastly, religion was a binary variable

for which women identified as Muslim or Hindu.

Data Analysis

Descriptive analysis was first conducted to assess the distributions of all exposures and

outcomes of interest, as well as all population characteristic variables. Women's education,

relative wealth quintile, religion, household size, household type, and years since marriage were

identified as potential confounding variables a priori. Bivariate analysis was then used to

examine the correlation between all covariates of interest and the exposure and the outcome

variables. Covariates associated with the exposure and the outcome variables at a 10% level of

significance were included in the final model as confounding variables.

A multi-level mixed effects linear regression model was used to account for the

clustering inherent in the study design (McCoach, 2019). Clustered data produces incorrect

standard errors when using traditional statistical analyses that assume independence (McCoach, 2019). In a multi-level analysis, the degree of relatedness of observations within the same cluster are directly estimated and modeled, thereby correcting standard errors and reducing the problem of inflated Type I error rates (McCoach, 2019). The following multi-level mixed-effects linear regression model was used to assess how empowerment predicted variation in dietary diversity:

$$DD_{ij} = \alpha_j + \beta_{1j} (EMPOWERMENT)_{ij} + \gamma_{1j} (COV_1)_{ij} + \cdots + \gamma_{kj} (COV_k)_{ij} + u_j$$
$$+ u(COV_1)_{ij} \ldots + u(COV_k)_{ij} + \varepsilon_{ij}$$

for i = 1, …, 450 women and j = 1, …, 96 clusters

This model included treatment, women's education, women's religion, and household wealth as final covariates. The model was initially run with overall empowerment score as the exposure, and then run separately with each agency domain score as the exposure, and finally with all 12 individual questions of the pro-WEAI as exposure variables.

IV. RESULTS

Descriptive analyses

The average age of women at the time of FAARM data collection was just over 30 years, and the average age at time of first marriage was just below 18 years (Table 1). The median number of children had by women participants was three, with a range between one and ten. Over 37% of women completed at least part of secondary education, compared to the 24% of men who completed the same level. The mean household size was 5.9 and the majority of participants (57%) lived in nuclear households consisting of immediate family.

Table 1: Demographic characteristics of respondents (N=457)

Variable	n, Mean, or Median	%, SD, or Range
Parity	3	(1-10)
Religion		
Muslim	331	(72.4%)
Hindu	126	(27.6%)
Age	30.9	(4.2)
Age at time of marriage	17.9	(2.4)
Age gap	8.2	(5.5)
Education gap in class years completed (husband-wife)	-1.1	(3.4)
Years since marriage	10.1	(4.1)
Household size	5.6	(1.9)
Household type		
Joint	196	(42.9%)
Nuclear	261	(57.1%)
Women's education		
Part primary	103	(22.5%)
Full primary	96	(21.0%)
Part secondary	172	(37.6%)
Husband's education		
Part primary	76	(16.6%)
Full primary	76	(16.6%)
Part secondary	112	(24.5%)

The mean empowerment score was 6.6, out of a total possible score of 12 (Table 2). The indicator with the highest proportion of adequacy was the ability to make decisions on financial services (96%), followed by 81% of women having adequate control over use of income, and 59% of women having adequate autonomy with income. Respect among household members had the lowest proportion of women achieving adequacy at 10%, closely followed by work balance where only 14% of women were categorized as having adequacy.

Table 2: Pro-WEAI results for adequacy in agency (N=457)

Variable	n or Mean	% or SD
Overall Empowerment		
Women's empowerment score	6.6	(1.8)
Intrinsic Agency		
Intimate partner violence not acceptable	346	(75.7%)
Autonomy in income	273	(59.7%)
Self-efficacy	199	(43.5%)
Respect among household members	46	(10.1%)
Instrumental Agency		
Access to and decisions on financial services	443	(96.9%)
Ownership of land and other assets	366	(80.1%)
Input in productive decisions	336	(73.5%)
Control over use of income	370	(81.0%)
Visiting important locations	233	(51.0%)
Work balance	64	(14.0%)
Collective Agency		
Group membership	253	(55.4%)
Membership in influential groups	86	(18.8%)

For MMD-W, 52% of women consumed over 15 grams a day of foods from at least 5 of the 10 food groups (Table 3).

Table 3: Results for MDD-W ≥ 15 grams a day (N=450)

Variable	n	%
Adequately diverse diet (≥5 food groups)	234	(52.0%)
Starchy staples	449	(99.8%)
Legumes	148	(32.9%)
Nuts	15	(3.3%)
Dairy	136	(30.2%)
Meat/fish	419	(93.1%)
Eggs	68	(15.1%)
Dark green leafy vegetables	146	(32.4%)
Vitamin A rich foods	39	(8.7%)
Other fruit	283	(62.9%)
Other vegetables	388	(86.2%)

The highest proportion of women consumed at least 15 grams a day of starch-based staples (99%), followed by meat/fish (93%), and other vegetables (86%). The foods groups with the lowest proportion of women consuming at least 15 grams a day was nuts (3%), vitamin A rich foods (8%), and eggs (15%). Dairy, dark green leafy vegetables, and legumes were consumed at 30%, 32%, and 33%, respectively. Other fruit was consumed by 63% of women.

Bivariate analyses

Bivariate analysis results (Table 4) suggested that, before adjusting for other factors, women's overall empowerment score was significantly associated with dietary diversity score β = 0.09 (95% CI: 0.03 – 0.16). Women's intrinsic agency score was also associated with dietary diversity β = 0.23 (95% CI: 0.11 – 0.35), while instrumental agency and collective agency were not. Of the intrinsic agency sub-domains, unacceptable intimate partner violence, autonomy in income, and respect among household members were the drivers of this association. Only one sub-domain of instrumental agency was associated with dietary diversity, ownership of land and other assets β = 0.33 (95% CI: 0.04 – 0.63). Of respondent characteristics the FAARM intervention (treatment), wealth, and education were associated with dietary diversity.

Table 4: Bivariate analysis of MDD-W with pro-WEAI and respondent characteristics (N=450)

Outcome	Variable	β	95% CI	p-value
Dietary Diversity	Pro-WEAI domains			
	Women's empowerment score	0.09	0.03 – 0.16	0.005
	Intrinsic agency score	0.23	0.11 – 0.35	<0.001
	Intimate partner violence not acceptable	0.48	0.20 – 0.75	0.001
	Autonomy in income	0.38	0.14 – 0.62	0.002
	Self-efficacy	0.05	-0.20 – 0.30	0.686
	Respect among household members	0.40	0.01-0.80	0.047
	Instrumental agency score	0.06	-0.05 – 0.16	0.302
	Access to and decisions on financial services	-0.57	-1.24 – 0.11	0.098
	Ownership of land and other assets	0.33	0.04 – 0.63	0.027
	Input in productive decisions	0.07	-0.20 – 0.35	0.612
	Control over use of income	0.10	-0.21 – 0.41	0.523
	Visiting important locations	0.00	-0.24 – 0.24	0.979
	Work balance	0.04	-0.30 – 0.38	0.828
	Collective agency score	0.02	-0.14 – 0.19	0.785
	Group membership	-0.01	-0.25 – 0.25	0.985
	Membership in influential groups	0.09	-0.24 – 0.42	0.593
	Respondent characteristics			
	Treatment	0.48	0.23 – 0.72	<0.001
	Wealth *Quintile 1 (Ref)*			
	Quintile 2	0.13	-0.20 – 0.46	0.430
	Quintile 3	0.32	-0.01 – 0.65	0.056
	Quintile 4	0.48	0.10 – 0.85	0.012
	Quintile 5	0.63	0.21 – 1.05	0.003
	Education	0.08	0.04 – 0.11	<0.001
	Religion *Muslim (Ref)*			
	Hindu	-0.09	-0.37 – 0.19	0.521

Regression analyses

Results of the adjusted model regression analyses indicated that intrinsic agency was the only construct to demonstrate significant predictive power over dietary diversity with β = 0.14

(95% CI: 0.02 – 0.26) (Table 5). Women's overall empowerment score did not significantly

predict variation in dietary diversity.

Table 5: Impact of overall empowerment score, and agency scores on dietary diversity (N=450)

Outcome	Domain	β	95% CI	p-value
Dietary diversity	Overall empowerment	0.03	-0.04 – 0.10	0.383
	Intrinsic agency	0.14	0.02 – 0.26	0.027
	Instrumental agency	0.02	-0.83 – 0.12	0.707
	Collective agency	-0.16	-0.16 – 0.09	0.083

* Model covariates: treatment, wealth, education, religion; model cluster: settlement

Table 6 shows results from regression analyses to examine associations between each

individual adequacy indicator and dietary diversity.

Table 6: Impact of agency sub-domains on dietary diversity (N=450)

Outcome	Domain		β	95% CI	p-value
Dietary diversity	Intrinsic agency	Intimate partner violence not acceptable	0.32	0.04 – 0.59	0.023
		Autonomy in income	0.27	0.04 – 0.51	0.023
		Self-efficacy	-0.10	-0.34 – 0.13	0.399
		Respect among household members	0.30	-0.08 – 0.68	0.126
	Instrumental agency	Access to and decisions on financial services	-0.59	-1.24 – 0.07	0.081
		Ownership of land and other assets	0.14	-0.15 – 0.43	0.357
		Input in productive decisions	0.01	-0.25 – 0.27	0.957
		Control over use of income	0.06	-0.23 – 0.35	0.684
		Visiting important locations	0.01	-0.22 – 0.23	0.964
		Work balance	0.07	-0.25 – 0.40	0.658
	Collective agency	Group membership	-0.22	-0.48 – 0.05	0.113
		Membership in influential groups	-0.19	-0.51 – 0.14	0.262

* Model covariates: treatment, wealth, education, religion; model cluster: settlement

The two indicators contributing to the significant association of intrinsic agency and dietary diversity are intimate partner violence not acceptable $\beta = 0.32$ (95% CI: 0.04 – 0.59) and autonomy in income $\beta = 0.27$ (95% CI: 0.04 – 0.51). None of the remaining indicators in the domains of instrumental or collective agency were associated with dietary diversity.

V. DISCUSSION

As one of the first studies to use the newly developed pro-WEAI, this research contributes to the field of public health's understanding of the mechanism by which women's empowerment influences women's nutritional health. This cross-sectional study found that sub-domains of agency were differentially associated women's dietary diversity. Intrinsic agency, most particularly autonomy in income and intimate partner violence not being acceptable, had the most significant impact on women's dietary diversity in this study population. However, women's overall empowerment score was not associated with dietary diversity, demonstrating the importance of investigating sub-domains of agency to capture associations between empowerment and nutritional health. Additionally, although the pro-WEAI was developed to capture agency as described in Kabeer's (1999) empowerment framework, the agency sub-domains utilized in this tool do not exhaustively measure the construct. Refinements to the pro-WEAI continue to be made. Current pro-WEAI measures of collective agency in the case of this study were so tied to women participating in FAARM's HFP intervention that it was difficult to assess the extent to which collective agency quantitatively impacted dietary diversity. Updating the pro-WEAI to reflect this challenge could improve its sensitivity to impact nutritional outcomes. It could also be that the relationship between empowerment (measured by the pro-WEAI using agency) and women's nutritional status is mediated by the resources a woman

possesses (i.e. education level, household wealth, etc.). Future research should explore mediation analyses and continue to develop methods to assess how the three domains of empowerment: agency, resources, and achievements, interact to influence nutrition.

Results from this study, however, reinforce the importance of intrinsic agency. Previous research has found sub-domains of agency to have differential impacts on household and children's nutrition (Jones et al., 2019; Jones et al., 2020). While previous studies demonstrate the importance of intrinsic agency for *children's* nutritional status (Jones et al., 2019; Yount et al., 2011) this work provides evidence that intrinsic agency is an important predictor of *women's* nutritional status as well. This study emphasizes the value of women's nutrition and provides context for assessing the role empowerment plays in increasing women's dietary diversity. Additionally, future HFP interventions should not overlook the importance of attitudes of domestic violence and women's ability to use income as she personally thinks is right when designing projects and measuring impact.

Quantitative measures of empowerment

The pro-WEAI is a purely quantitative measure of empowerment, and there is still debate as to the extent to which a concept as complex as empowerment can be adequately captured by survey-based instruments (Akter et al., 2017). Previous research has demonstrated, for example, that many women hold land titles suggesting they therefore possess some level of empowerment. However, in certain contexts this is only for the purpose of taxes or subsidies and their spouses are the ones who make decisions about land utilization (Deere et al., 2013). It has also been noted that women have easy access to credit since microcredit organizations prefer (or require) women borrowers, but often these loans are controlled by male relatives (Goetz & Gupta, 1996).

The complex nature of these interrelated components of empowerment make drawing conclusions challenging, and results from these analyses should not disavow the important role women's empowerment has for nutrition and agricultural interventions. Future studies should also include qualitative components to provide detail on the pathways by which empowerment impacts nutrition.

Strengths and Limitations

This study had several strengths. First, this study used the standardized pro-WEAI survey, as opposed to the use of aggregate characteristics regularly collected from Demographic and Health Surveys. The pro-WEAI allows for individual empowerment to be directly assessed. Second, although there are still ways in which construct measures can be improved, the pro-WEAI has been cognitively validated in Bangladesh, where this study was conducted, and 90% of participants did not report difficulty or unease answering any of the questions (Hannan et al., 2020). Finally, data collectors were given thorough training and data was regularly checked to assess quality.

Despite these strengths, this study also has at least two limitations. First, dietary diversity data was based on self-reports from the previous day, which may not reflect usual intake and therefore could add measurement error. Dietary diversity data was also collected in only one season, and it could be possible that the relationship between empowerment and dietary diversity becomes stronger in either lean seasons, or seasons where fresh fruits and vegetables are plentiful. Additionally, the pro-WEAI is a relatively new measurement tool and has not been fully validated. Although two of the twelve pro-WEAI modules (the module on attitudes about domestic violence and the module on self-efficacy) have been independently validated, the

survey in its entirety has not and results should therefore be interpreted with caution (Yount et al., 2019).

VI. PUBLIC HEALTH IMPLICATIONS

The methodological implications of these findings demonstrate the importance of incorporating multiple domains of agency to understand how empowerment truly drives impact on outcomes of interest. The relationship between women's empowerment and women's nutrition is complex and not easily measured, but by including indicators representing various components of empowerment and agency, more robust analyses can be conducted.

Although these results are not conclusive on women's overall empowerment, results emphasize the importance of intrinsic agency. Attitudes about domestic violence and autonomy in income were particularly associated with women's dietary diversity. For south Asia, where low social status of women is thought to play a particularly meaningful role in the region's high rate of women's undernutrition, impacts of gender norms on women's nutritional health should continue to be studied. Additionally, when future policy and programming bodies plan HPF or other nutrition-sensitive agriculture programs, attention should be focused on attuites and beliefs when planning interventions and developing theory of change models.

PROJECT-LEVEL WOMEN'S EMPOWERMENT IN AGRICULTURE INDEXPILOT
VERSION
MAY 2018

These survey modules are a DRAFT version of the project-level Women's Empowerment in Agriculture Index (pro-WEAI). Optional questions and modules are designated in purple text. The survey questions, format, and required portions are subject to change as the pro-WEAI continues to develop. Updated survey modules may be available from the pro-WEAI team.

Pro-WEAI is a survey-based index for measuring empowerment, agency, and inclusion of women in the agriculture sector. It is being developed jointly by the International Food Policy Research Institute (IFPRI), the Oxford Policy and Human Development Initiative (OHPI), and thirteen partner projects in the portfolio of the Gender, Agriculture, and Assets Project, Phase 2 (GAAP2). The tool helps agricultural development projects assess women's empowerment in a project setting, diagnose areas of women's disempowerment, design strategies to address deficiencies, and monitor project outcomes. Pro-WEAI is an adaptation of the Women's Empowerment in Agriculture Index (WEAI), originally developed in 2012 by IFPRI, the United States Agency for International Development (USAID), and OPHI.

For more information about pro-WEAI, please visit weai.ifpri.info or email Hazel Malapit at h.malapit@cgiar.org.

MODULE G. WOMEN'S EMPOWERMENT IN AGRICULTURE INDEX – Pilot Pro-WEAI Version

Note to survey designers: The information in module G1 can be captured in different ways; however, there must be a way to: (a) identify the proper individual within the household to be asked the survey, (b) link this individual from the module to the household roster, (c) code the outcome of the interview, especially if the individual is not available, to distinguish this from missing data, and (d) record who else in the household was present during the interview. This instrument must be adapted for country context including adding relevant examples and translations into local languages when appropriate.

Note to enumerators: This questionnaire should be administered separately to the primary and secondary respondents identified in the household roster of the household level questionnaire. You should complete this coversheet for each individual identified in the "selection section" even if the individual is not available to be interviewed for reporting purposes. For some surveys (such as those focusing on nutrition outcomes), the female respondent may be the beneficiary woman or mother or primary caregiver of the index child (also the respondent for the pro-WEAI nutrition module). Please make sure that she is also the person interviewed for this questionnaire and that the male respondent is her spouse/partner (if applicable).

Please double-check to ensure:

- You have completed the roster section of the household questionnaire to identify the correct primary and/or secondary respondent(s);
- You have noted the household ID and individual ID correctly for the person you are about to interview;
- You have gained informed consent from the individual in the household questionnaire;
- You have sought to interview the individual in private or where other members of the household cannot overhear or contribute answers.
- Do not attempt to make responses between the primary and secondary respondents the same—it is okay for them to be different.

MODULE G1. INDIVIDUAL IDENTIFICATION

G1.01. HOUSEHOLD IDENTIFICATION:		G1.04 TYPE OF HOUSEHOLD	MALE AND FEMALE ADULT...1 FEMALE ADULT ONLY 2
G1.02. NAME OF RESPONDENT CURRENTLY BEING INTERVIEWED (ID CODE FROM ROSTER IN SECTION B HOUSEHOLD ROSTER): **SURNAME, OTHER NAME:** _____		**G1.05. OUTCOME OF INTERVIEW:** CIRCLE **ONE**	COMPLETED ....1 HOUSEHOLD MEMBER TOO ILL TO RESPOND/COGNITIVELY IMPAIRED...2 RESPONDENT NOT AT HOME/TEMPORARILY UNAVAILABLE......................3 RESPONDENT NOT AT HOME/EXTENDED ABSENCE ....4 REFUSED ....5 COULD NOT LOCATE..6
G1.03. SEX OF RESPONDENT:	MALE.....................................1 FEMALE 2	**G1.06. ABILITY TO BE INTERVIEWED ALONE:** CIRCLE **ONE**	ALONE ....1 WITH ADULT FEMALES PRESENT ....2 WITH ADULT MALES PRESENT...3 WITH ADULTS OF BOTH SEX PRESENT ....4 WITH CHILDREN PRESENT..5 WITH ADULTS OF BOTH SEX AND CHILDREN PRESENT 6

HOUSEHOLD IDENTIFICATION (IN DATA FILE, EACH SUB-MODULE (G2-G8) MUST BE LINKED WITH A HH AND RESPONDENT ID)

HOUSEHOLD ID				
RESPONDENT ID				

MODULE G2: ROLE IN HOUSEHOLD DECISION-MAKING AROUND PRODUCTION AND INCOME

Now I'd like to ask you some questions about your participation in certain types of work activities and on making decisions on various aspects of household life.	Did you [NAME] participate in [ACTIVITY] in the past 12 months (that is, during the last [one/two] cropping seasons), from [PRESENT MONTH] last year to [PRESENT MONTH] this year?	When decisions are made regarding [ACTIVITY], who is it that normally takes the decision? **ENTER UP TO THREE (3) MEMBER IDs** **IF RESPONSE IS MEMBER ID (SELF) ONLY → G2.05** **OTHER CODES:** NON-HH MEMBER........94 NOT APPLICABLE.........98 → *NEXT ACTIVITY*			How much input did you have in making decisions about [ACTIVITY]? **USE CODE G2↓**	To what extent do you feel you can participate in decisions regarding [ACTIVITY] if you want(ed) to? **CIRCLE ONE**	To what extent are you able to access information that you feel is important for making informed decisions regarding [ACTIVITY]? **CIRCLE ONE**	How much input did you have in decisions about how much of the outputs of [ACTIVITY] to keep for consumption at home rather than selling? **USE CODE G2↓**	How much input did you have in decisions about how to use income generated from [ACTIVITY]? **USE CODE G2↓**
ACTIVITY	**G2.01**	**G2.02**			**G2.03**	**G2.04**	**G2.05**	**G2.06**	**G2.07**
		ID #1	ID #2	ID #3					
A Staple grain farming and processing of the harvest: grains that are grown primarily for food consumption (rice, maize, wheat, millet)	YES.... 1 NO .....2 → *ACTIVITY B*					NOT AT ALL ....1 SMALL EXTENT ....2 MEDIUM EXTENT........3 TO A HIGH EXTENT .4	NOT AT ALL ....1 SMALL EXTENT ....2 MEDIUM EXTENT........3 TO A HIGH EXTENT 4		
B Horticultural (gardens) or high value crop farming and processing of the harvest	YES.... 1 NO .....2 → *ACTIVITY C*					NOT AT ALL ....1 SMALL EXTENT ....2 MEDIUM EXTENT........3 TO A HIGH EXTENT .4	NOT AT ALL ....1 SMALL EXTENT ....2 MEDIUM EXTENT........3 TO A HIGH EXTENT 4		
C Large livestock raising (cattle, buffaloes) and processing of milk and/or meat	YES.... 1 NO .....2 → *ACTIVITY D*					NOT AT ALL ....1 SMALL EXTENT ....2 MEDIUM EXTENT........3 TO A HIGH EXTENT .4	NOT AT ALL ....1 SMALL EXTENT ....2 MEDIUM EXTENT........3 TO A HIGH EXTENT 4		
D Small livestock raising (sheep, goats, pigs) and processing of milk and/or meat	YES.... 1 NO .....2 → *ACTIVITY E*					NOT AT ALL ....1 SMALL EXTENT ....2 MEDIUM EXTENT........3 TO A HIGH EXTENT .4	NOT AT ALL ....1 SMALL EXTENT ....2 MEDIUM EXTENT........3 TO A HIGH EXTENT 4		
E Poultry and other small animals raising (chickens, ducks, turkeys) and processing of eggs and/or meat	YES.... 1 NO .....2 → *ACTIVITY F*					NOT AT ALL ....1 SMALL EXTENT ....2 MEDIUM EXTENT........3 TO A HIGH EXTENT .4	NOT AT ALL ....1 SMALL EXTENT ....2 MEDIUM EXTENT........3 TO A HIGH EXTENT 4		

CODE G2

LITTLE TO NO INPUT IN DECISIONS.....................................1
INPUT INTO SOME DECISIONS 2
INPUT INTO MOST OR ALL DECISIONS...............................3
NOT APPICABLE / NO DECISION MADE 98

		Did you [NAME] participate in [ACTIVITY] in the past 12 months (that is, during the last [one/two] cropping seasons), from [PRESENT MONTH] last year to [PRESENT MONTH] this year?	When decisions are made regarding [ACTIVITY], who is it that normally takes the decision? **ENTER UP TO THREE (3) MEMBER IDs** **IF RESPONSE IS <u>MEMBER ID (SELF) ONLY</u> → G2.05** **OTHER CODES:** NON-HH MEMBER........94 NOT APPLICABLE ....98 → *NEXT ACTIVITY*			How much input did you have in making decisions about [ACTIVITY]? **USE CODE G2↓**	To what extent do you feel you can participate in decisions regarding [ACTIVITY] if you want(ed) to? **CIRCLE <u>ONE</u>**	To what extent are you able to access information that you feel is important for making informed decisions regarding [ACTIVITY]? **CIRCLE <u>ONE</u>**	How much input did you have in decisions about how much of the outputs of [ACTIVITY] to keep for consumption at home rather than selling? **USE CODE G2↓**	How much input did you have in decisions about how to use income generated from [ACTIVITY]? **USE CODE G2↓**
ACTIVITY		**G2.01**	**G2.02**			**G2.03**	**G2.04**	**G2.05**	**G2.06**	**G2.07**
			ID #1	**ID #2**	**ID #3**					
F	Fishpond culture	YES.... 1 NO .....2 → *ACTIVITY G*					NOT AT ALL................. 1 SMALL EXTENT...........2 MEDIUM EXTENT.......3 TO A HIGH EXTENT.4	NOT AT ALL............... 1 SMALL EXTENT.......... 2 MEDIUM EXTENT.......3 TO A HIGH EXTENT 4		
G	Non-farm economic activities (running a small business, self-employment, buy-and-sell)	YES.... 1 NO .....2 → *ACTIVITY H*					NOT AT ALL................. 1 SMALL EXTENT...........2 MEDIUM EXTENT.......3 TO A HIGH EXTENT.4	NOT AT ALL............... 1 SMALL EXTENT.......... 2 MEDIUM EXTENT.......3 TO A HIGH EXTENT 4		
H	Wage and salary employment (work that is paid for in cash or in-kind, including both agriculture and other wage work)	YES.... 1 NO .... → *ACTIVITY I*					NOT AT ALL................. 1 SMALL EXTENT...........2 MEDIUM EXTENT ...... 3 TO A HIGH EXTENT.4	NOT AT ALL............... 1 SMALL EXTENT.......... 2 MEDIUM EXTENT.......3 TO A HIGH EXTENT 4		
I	Large, occasional household purchases (bicycles, land, transport vehicles)						NOT AT ALL................. 1 SMALL EXTENT...........2 MEDIUM EXTENT.......3 TO A HIGH EXTENT.4	NOT AT ALL................. 1 SMALL EXTENT.......... 2 MEDIUM EXTENT.......3 TO A HIGH EXTENT 4		
J	Routine household purchases (food for daily consumption or other household needs)						NOT AT ALL................. 1 SMALL EXTENT...........2 MEDIUM EXTENT.......3 TO A HIGH EXTENT.4	NOT AT ALL................. 1 SMALL EXTENT.......... 2 MEDIUM EXTENT.......3 TO A HIGH EXTENT 4		

CODE G2
LITTLE TO NO INPUT IN DECISIONS.....................................1
INPUT INTO SOME DECISIONS 2
INPUT INTO MOST OR ALL DECISIONS...............................3
NOT APPLICABLE / NO DECISION MADE 98

HOUSEHOLD ID					
RESPONDENT ID			

MODULE G3(A): ACCESS TO PRODUCTIVE CAPITAL

Now I'd like to ask you specifically about your household's land.

QUESTION		RESPONSE		
G3.01. Does anyone in your household currently own or cultivate land?		YES .... 1 NO......... 2 → *G3.06, ITEM A*		
G3.02. Who generally makes decisions about what to plant on this land?	ENTER UP TO THREE (3) MEMBER IDs OTHER CODES: NON-HH MEMBER ....94 NOT APPLICABLE...................................98	ID #1	ID #2	ID #3
G3.03. Do you [NAME] solely or jointly cultivate any land?	CIRCLE **ONE**	YES, SOLELY...1 YES, JOINTLY...2 YES, SOLELY AND JOINTLY ....3 NO...4		
G3.04. Who generally makes decisions about what to plant on the land that you yourself cultivate?	ENTER UP TO THREE (3) MEMBER IDs OTHER CODES: NON-HH MEMBER ....94 NOT APPLICABLE...................................98	ID #1	ID #2	ID #3
G3.05. Do you own any of the land owned or cultivated by your household?	CIRCLE **ONE**	YES, SOLELY...1 YES, JOINTLY...2 YES, SOLELY AND JOINTLY ....3 NO...4		

Now I'd like to ask you about a number of items that could be used to generate income.	Does anyone in your household currently have any [ITEM]?	Do you [NAME] own any [ITEM]? CIRCLE ONE
ITEM	**G3.06**	**G3.07**
A Large livestock (cattle, buffaloes)	YES........1 NO........ 2 → **ITEM B**	YES, SOLELY..1 YES, JOINTLY ....2 YES, SOLELY AND JOINTLY..............................3 NO...4
B Small livestock (sheep, goats, pigs)	YES........1 NO........ 2 → **ITEM C**	YES, SOLELY..1 YES, JOINTLY ....2 YES, SOLELY AND JOINTLY..............................3 NO...4
C Poultry and other small animals (chickens, ducks, turkeys)	YES........1 NO........ 2 → **ITEM D**	YES, SOLELY..1 YES, JOINTLY ....2 YES, SOLELY AND JOINTLY..............................3 NO...4
D Fish pond or fishing equipment	YES........1 NO........ 2 → **ITEM E**	YES, SOLELY..1 YES, JOINTLY ....2 YES, SOLELY AND JOINTLY..............................3 NO...4
E Non-mechanized farm equipment (hand tools, animal-drawn plough)	YES........1 NO........ 2 → **ITEM F**	YES, SOLELY..1 YES, JOINTLY ....2 YES, SOLELY AND JOINTLY..............................3 NO...4
F Mechanized farm equipment (tractor-plough, power tiller, treadle pump)	YES........1 NO........ 2 → **ITEM G**	YES, SOLELY..1 YES, JOINTLY ....2 YES, SOLELY AND JOINTLY..............................3 NO...4
G Non-farm business equipment (solar panels used for recharging, sewing machine, brewing equipment, fryers)	YES........1 NO........ 2 → **ITEM H**	YES, SOLELY..1 YES, JOINTLY ....2 YES, SOLELY AND JOINTLY..............................3 NO...4
H House or building	YES........1 NO...........→ **ITEM I**	YES, SOLELY..1 YES, JOINTLY ....2 YES, SOLELY AND JOINTLY..............................3 NO...4
I Large consumer durables (refrigerator, TV, sofa)	YES........1 NO........ 2 → **ITEM J**	YES, SOLELY..1 YES, JOINTLY ....2 YES, SOLELY AND JOINTLY..............................3 NO...4

		Does anyone in your household currently own any [ITEM]?	Do you [NAME] own any [ITEM]? **CIRCLE ONE**
ITEM		**G3.06**	**G3.07**
J	Small consumer durables (radio, cookware)	YES .... 1 NO.........2 → *ITEM K*	YES, SOLELY..1 YES, JOINTLY...2 YES, SOLELY AND JOINTLY.............................3 NO...4
K	Cell phone	YES .... 1 NO.........2 → *ITEM L*	YES, SOLELY..1 YES, JOINTLY...2 YES, SOLELY AND JOINTLY.............................3 NO...4
L	Other land not used for agricultural purposes (pieces/plots, residential or commercial land)	YES .... 1 NO.........2 → *ITEM M*	YES, SOLELY..1 YES, JOINTLY...2 YES, SOLELY AND JOINTLY.............................3 NO...4
M	Means of transportation (bicycle, motorcycle, car)	YES .... 1 NO.........2 → *MODULE G3(B)*	YES, SOLELY..1 YES, JOINTLY...2 YES, SOLELY AND JOINTLY.............................3 NO...4

MODULE G3(B): ACCESS TO FINANCIAL SERVICES

		Next I'd like to ask about your household's experience with borrowing money or other items (in-kind) in the past 12 months.	Would you or anyone in your household be able to take a loan or borrow cash/in-kind from [SOURCE] if you wanted to?	Has anyone in your household taken any loans or borrowed cash/in-kind from [SOURCE] in the past 12 months? CIRCLE ONE	Who made the decision to borrow from [SOURCE] most of the time? ENTER UP TO THREE (3) MEMBER IDs OTHER CODES: NON-HH MEMBER .... 94 NOT APPLICABLE 98			Who makes the decision about what to do with the money or item borrowed from [SOURCE] most of the time? ENTER UP TO THREE (3) MEMBER IDs OTHER CODES: NON-HH MEMBER........94 NOT APPLICABLE..........98			Who is responsible for repaying the money or item borrowed from [SOURCE]? ENTER UP TO THREE (3) MEMBER IDs OTHER CODES: NON-HH MEMBER .... 94 NOT APPLICABLE..........98		
					G3.10			G3.11			G3.12		
	LENDING SOURCES	**G3.08**	**G3.09**		ID #1	ID #2	ID #3	ID #1	ID #2	ID #3	ID #1	ID #2	ID #3
A	Non-governmental organization (NGO)	YES ....1 NO……....2 → SOURCE B MAYBE ...3	YES, CASH............................ 1 YES, IN-KIND .... 2 YES, CASH AND IN-KIND..... 3 NO.................................... 4 → SOURCE B DON'T KNOW 97										
B	Formal lender (bank/financial institution)	YES ....1 NO……....2 → SOURCE C MAYBE ...3	YES, CASH............................ 1 YES, IN-KIND .... 2 YES, CASH AND IN-KIND..... 3 NO.................................... 4 → SOURCE C DON'T KNOW 97										
C	Informal lender	YES ....1 NO……....2 → SOURCE D MAYBE ...3	YES, CASH............................ 1 YES, IN-KIND .... 2 YES, CASH AND IN-KIND..... 3 NO.................................... 4 → SOURCE D DON'T KNOW 97										
D	Friends or relatives	YES ....1 NO……....2 → SOURCE E MAYBE ...3	YES, CASH............................ 1 YES, IN-KIND .... 2 YES, CASH AND IN-KIND..... 3 NO.................................... 4 → SOURCE E DON'T KNOW 97										
E	Group based micro-finance or lending including VSLAs / SACCOs	YES ....1 NO……....2 → SOURCE F MAYBE ...3	YES, CASH............................ 1 YES, IN-KIND .... 2 YES, CASH AND IN-KIND..... 3 NO.................................... 4 → SOURCE F DON'T KNOW 97										
F	Informal credit / savings groups (.e.g., merry-go-rounds, tontines, funeral societies, etc.)	YES ....1 NO..........2 → G3.13 MAYBE ...3	YES, CASH............................ 1 YES, IN-KIND .... 2 YES, CASH AND IN-KIND..... 3 NO.................................... 4 → G3.13 DON'T KNOW 97										

G3.13	An account can be used to save money, to make or receive payments, or to receive wages or financial help. Do you, either by yourself or together with someone else, currently have an account at any of the following places: a bank or other formal institution (e.g., post office)?	YES ....1 NO ....2 DON'T KNOW 97

HOUSEHOLD ID					
RESPONDENT ID					

MODULE G4: TIME ALLOCATION

G4.01: PLEASE RECORD A LOG OF THE ACTIVITIES FOR THE INDIVIDUAL IN THE LAST COMPLETE 24 HOURS (STARTING YESTERDAY MORNING AT 4 AM, FINISHING 3:59 AM OF THE CURRENT DAY). THE TIME INTERVALS ARE MARKED IN 15 MIN INTERVALS. MARK ONE ACTIVITY FOR EACH TIME PERIOD BY ENTERING THE CORRESPONDING ACTIVITY CODE IN THE BOX.

G4.02: CHECK THE BOX BELOW IF THE RESPONDENT WAS CARING FOR CHILDREN WHILE PERFORMING EACH ACTIVITY.

Now I'd like to ask you about how you spent your time during the past 24 hours. We'll begin from yesterday morning, and continue through to this morning. This will be a detailed accounting. I'm interested in everything you did (i.e. resting, eating, personal care, work inside and outside the home, caring for children, cooking, shopping, socializing, etc.), even if it didn't take you much time. I'm particularly interested in agricultural activities such as farming, gardening, and livestock raising whether in the field or on the homestead. I'm also interested in how much time you spent caring for children, especially if it happened while you did some other activity (e.g., collecting water while carrying a child or cooking while watching after a sleeping child).

		Night		Morning		Day									
		4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00		
G4.01 Activity **(WRITE ACTIVITY CODE)**															
G4.02 Did you also care for children?	YES ....CHECK BOX NO ....LEAVE BLANK														

		Day		Evening		Night									
		16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00	1:00	2:00	3:00		
G4.01 Activity **(WRITE ACTIVITY CODE)**															
G4.02 Did you also care for children?	YES ....CHECK BOX NO ....LEAVE BLANK														

ACTIVITY CODES FOR G4.01

A .... Sleeping and resting
B .... Eating and drinking
C…........................Personal care
D…...........School (incl. homework)
E.......................Work as employed
F......................Own business work
G… .... Staple grain farming

H .... Horticultural (gardens) or high value crop farming
I… .... Large livestock raising (cattle, buffaloes)
J .... Small livestock raising (sheep, goats, pigs)
K .... Poultry and other small animals raising (chickens, ducks, turkeys)
L..Fishpond culture
M ....Commuting (to/from work or school)

N .... Shopping / getting service (incl. health services)
O ....Weaving / sewing / textile care
P...Cooking
Q...............Domestic work (incl. fetching water and fuel)
R .... Caring for children
S ....Caring for adults (sick, elderly)
T............................... Traveling (not for work or school)

U ....Exercising
V......Social activities and hobbies
W .... Religious activities
X .... Other (specify)

G4.03. In the last 24 hours did you work (at home or outside of the home including chores or other domestic activities) less than usual, about the same as usual, or more than usual? LESS THAN USUAL .... 1 ABOUT THE SAME AS USUAL .... 2 MORE THAN USUAL................................. 3 **IF RESPONDENT IS <u>MALE</u> → MODULE G5**	**FOR <u>FEMALES</u> ONLY: DOES RESPONDENT HAVE A CHILD UNDER 5 YEARS OLD?** YES ...... 1 → G4.04 NO… ...... 2 → MODULE G5	**G4.04.** If you wanted to do something (livelihood-related, training-related, self-care) and could not take your child with you, is there someone who could care for your child in your absence? YES ....1 → G4.05 NO….......2 → MODULE G5	**G4.05.** Who? **ENTER UP TO THREE (3) MEMBER IDs** **OTHER CODES:** NON-HH MEMBER.........94 NOT APPLICABLE..........98	**ID #1**	**ID #2**	**ID #3**

	HOUSEHOLD ID					
	RESPONDENT ID					

MODULE G5: GROUP MEMBERSHIP

Now I'm going to ask you about groups in the community. These can be either formal or informal and customary groups.	Is there a [GROUP] in your community?	Is this group composed of all male or female or mixed-sex members?	Are you an active member of this [GROUP]?	To what extent do you feel like you can influence decisions in this [GROUP]?	To what extent does this [GROUP] influence life in the community beyond the group activities?
GROUP CATEGORIES	**G5.01**	**G5.02**	**G5.03**	**G5.04**	**G5.05**
A Agricultural / livestock / fisheries producer's group (including marketing groups)	YES.......................1 NO.........................2 → **GROUP B** DON'T KNOW...........97	ALL MALE ....1 ALL FEMALE.........................2 MIXED SEX ....3 DON'T KNOW… 97	YES……1 NO ....2 → **GROUP B**	NOT AT ALL ....1 SMALL EXTENT......................2 MEDIUM EXTENT ....3 HIGH EXTENT.........................4	NOT AT ALL...........................1 SMALL EXTENT....................2 MEDIUM EXTENT ....3 HIGH EXTENT 4
B Water users' group	YES.......................1 NO.........................2 → **GROUP C** DON'T KNOW...........97	ALL MALE ....1 ALL FEMALE.........................2 MIXED SEX ....3 DON'T KNOW… 97	YES……1 NO ....2 → **GROUP C**	NOT AT ALL ....1 SMALL EXTENT......................2 MEDIUM EXTENT ....3 HIGH EXTENT.........................4	NOT AT ALL...........................1 SMALL EXTENT....................2 MEDIUM EXTENT ....3 HIGH EXTENT 4
C Forest users' group	YES.......................1 NO.........................2 → **GROUP D** DON'T KNOW...........97	ALL MALE ....1 ALL FEMALE.........................2 MIXED SEX ....3 DON'T KNOW… 97	YES……1 NO ....2 → **GROUP D**	NOT AT ALL ....1 SMALL EXTENT......................2 MEDIUM EXTENT ....3 HIGH EXTENT.........................4	NOT AT ALL...........................1 SMALL EXTENT....................2 MEDIUM EXTENT ....3 HIGH EXTENT 4
D Credit or microfinance group (including SACCOs / merry-go-rounds / VSLAs)	YES.......................1 NO.........................2 → **GROUP E** DON'T KNOW...........97	ALL MALE ....1 ALL FEMALE.........................2 MIXED SEX ....3 DON'T KNOW… 97	YES……1 NO ....2 → **GROUP E**	NOT AT ALL ....1 SMALL EXTENT......................2 MEDIUM EXTENT ....3 HIGH EXTENT.........................4	NOT AT ALL...........................1 SMALL EXTENT....................2 MEDIUM EXTENT ....3 HIGH EXTENT 4
E Mutual help or insurance group (including burial societies)	YES.......................1 NO.........................2 → **GROUP F** DON'T KNOW...........97	ALL MALE ....1 ALL FEMALE.........................2 MIXED SEX ....3 DON'T KNOW… 97	YES……1 NO ....2 → **GROUP F**	NOT AT ALL ....1 SMALL EXTENT......................2 MEDIUM EXTENT ....3 HIGH EXTENT.........................4	NOT AT ALL...........................1 SMALL EXTENT....................2 MEDIUM EXTENT ....3 HIGH EXTENT 4
F Trade and business association group	YES.......................1 NO.........................2 → **GROUP G** DON'T KNOW...........97	ALL MALE ....1 ALL FEMALE.........................2 MIXED SEX ....3 DON'T KNOW… 97	YES……1 NO ....2 → **GROUP G**	NOT AT ALL ....1 SMALL EXTENT......................2 MEDIUM EXTENT ....3 HIGH EXTENT.........................4	NOT AT ALL...........................1 SMALL EXTENT....................2 MEDIUM EXTENT ....3 HIGH EXTENT 4
G Civic group (improving community) or charitable group (helping others)	YES.......................1 NO.........................2 → **GROUP H** DON'T KNOW...........97	ALL MALE ....1 ALL FEMALE.........................2 MIXED SEX ....3 DON'T KNOW… 97	YES……1 NO ....2 → **GROUP H**	NOT AT ALL ....1 SMALL EXTENT......................2 MEDIUM EXTENT ....3 HIGH EXTENT.........................4	NOT AT ALL...........................1 SMALL EXTENT....................2 MEDIUM EXTENT ....3 HIGH EXTENT 4

			ALL			
H	Religious group	YES ....1 NO ....2 **GROUP I** DON'T KNOW...........97	MALE ....1 ALL FEMALE.......................... 2 MIXED SEX ....3 DON'T KNOW… 97	YES……1 NO .... → **GROUP I**	NOT AT ALL ....1 SMALL EXTENT......................2 MEDIUM EXTENT ....3 HIGH EXTENT...........................4	NOT AT ALL ....1 SMALL EXTENT.....................2 MEDIUM EXTENT ....3 HIGH EXTENT 4
I	Other (specify): _____	YES ....1 NO ....2 **MODULE G6** DON'T KNOW...........97	MALE ....1 ALL FEMALE.......................... 2 MIXED SEX ....3 DON'T KNOW… 97	YES……1 NO...... 2 → **MODULE G6**	NOT AT ALL ....1 SMALL EXTENT......................2 MEDIUM EXTENT ....3 HIGH EXTENT...........................4	NOT AT ALL ....1 SMALL EXTENT.....................2 MEDIUM EXTENT ....3 HIGH EXTENT 4

HOUSEHOLD ID						
RESPONDENT ID						

MODULE G6. PHYSICAL MOBILITY

QUESTION	RESPONSE FOR G6.01 - G6.06: USE CODE G6↓
G6.01 How often do you visit an urban center?	
G6.02 How often do you go to the market / haat / bazaar?	
G6.03 How often do you go to visit family or relatives?	
G6.04 How often do you go to visit a friend / neighbor's house?	
G6.05 How often do you go to the hospital / clinic / doctor (seek health service)?	
G6.06 How often do you go to a public village gathering / community meeting / training for NGO or programs?	
G6.07. In the last 12 months, how many times have you been away from home for one or more nights (in other words, sleeping somewhere else for the night)?	
G6.08. In the last 12 months, have you been away from home for more than one month at a time?	YES .... 1 NO………………………………………….. 2 *IF RESPONDENT IS <u>MALE</u> →MODULE G7*

CODE G6
EVERYDAY 1
EVERY WEEK AT LEAST ONCE 2
EVERY 2 WEEKS AT LEAST ONCE..3
EVERY MONTH AT LEAST ONCE..4
LESS THAN ONCE A MONTH 5
NEVER 6

REMAINDER OF MODULE (G6.09-G6.08) SHOULD ONLY BE ASKED IF RESPONDENT IS <u>FEMALE</u>

Now I'd like to ask you some questions about different places you might visit.	Who usually decides whether you can go to [PLACE]? ENTER UP TO THREE (3) MEMBER IDs IF RESPONSE IS <u>MEMBER ID (SELF) ONLY</u> → NEXT PLACE OTHER CODES: NON-HH MEMBER......... 94 NOT APPLICABLE 98			Does your husband/partner or other household member object to you going to <u>alone</u> to [PLACE]?	Under what circumstances would this person <u>NOT</u> object to your going to [PLACE] alone? CIRCLE <u>ALL</u> APPLICABLE	Do these objections prevent you from going <u>alone</u> to [PLACE]?
PLACE	**G6.09**			**G6.10**	**G6.11**	**G6.12**
	ID #1	ID #2	ID #3			
A Urban center				YES......1 NO....... 2 → *PLACE B*	IF I HAVE COMPANY (RELATIVES, CHILDREN) .... 1 IF I CAN ARRANGE MY OWN EXPENSES (FOR TRANSPORT) .... 2 IF I FOLLOW PURDAH / DRESS ACCEPTABLY....................................... 3 OTHER (SPECIFY) .... 4 UNDER NO CIRCUMSTANCES WOULD I BE ALLOWED TO GO ....5 → *PLACE B*	YES......1 NO........2
B Market / haat / bazaar				YES......1 NO....... 2 → *PLACE C*	IF I HAVE COMPANY (RELATIVES, CHILDREN).......................................1 IF I CAN ARRANGE MY OWN EXPENSES (FOR TRANSPORT)................. 2 IF I FOLLOW PURDAH / DRESS ACCEPTABLY.......................................3 OTHER (SPECIFY) ....4 UNDER NO CIRCUMSTANCES WOULD I BE ALLOWED TO GO ....5 → *PLACE C*	YES......1 NO........2
C Visit family or relatives				YES......1 NO....... 2 → *PLACE D*	IF I HAVE COMPANY (RELATIVES, CHILDREN).......................................1 IF I CAN ARRANGE MY OWN EXPENSES (FOR TRANSPORT)................. 2 IF I FOLLOW PURDAH / DRESS ACCEPTABLY.......................................3 OTHER (SPECIFY) .... 4 UNDER NO CIRCUMSTANCES WOULD I BE ALLOWED TO GO ....5 → *PLACE D*	YES......1 NO........2
D Visit a friend / neighbor's house				YES......1 NO....... 2 → *PLACE E*	IF I HAVE COMPANY (RELATIVES, CHILDREN).......................................1 IF I CAN ARRANGE MY OWN EXPENSES (FOR TRANSPORT)................. 2 IF I FOLLOW PURDAH / DRESS ACCEPTABLY.......................................3 OTHER (SPECIFY) .... 4 UNDER NO CIRCUMSTANCES WOULD I BE ALLOWED TO GO ....5 → *PLACE E*	YES......1 NO........2
E Hospital / clinic / doctor (seek health service)				YES......1 NO....... 2 → *PLACE F*	IF I HAVE COMPANY (RELATIVES, CHILDREN).......................................1 IF I CAN ARRANGE MY OWN EXPENSES (FOR TRANSPORT)................. 2 IF I FOLLOW PURDAH / DRESS ACCEPTABLY.......................................3 OTHER (SPECIFY) .... 4 UNDER NO CIRCUMSTANCES WOULD I BE ALLOWED TO GO ....5 → *PLACE F*	YES......1 NO........2

		Who usually decides whether you can go to [PLACE]? **ENTER UP TO THREE (3) MEMBER IDs** **IF RESPONSE IS MEMBER ID (SELF) ONLY → NEXT PLACE** **OTHER CODES:** NON-HH MEMBER......... 94 NOT APPLICABLE 98			Does your husband/partner or other household member object to you going alone to [PLACE]?	Under what circumstances would this person NOT object to your going to [PLACE] alone? **CIRCLE ALL APPLICABLE**	Do these objections prevent you from going alone to [PLACE]?
PLACE		**G6.09**			**G6.10**	**G6.11**	**G6.12**
		ID #1	ID #2	ID #3			
F	Temple / church / mosque				YES……1 NO ....2 → *PLACE G*	IF I HAVE COMPANY (RELATIVES, CHILDREN) ....1 IF I CAN ARRANGE MY OWN EXPENSES (FOR TRANSPORT)...................2 IF I FOLLOW PURDAH / DRESS ACCEPTABLY ....3 OTHER (SPECIFY) .... 4 UNDER NO CIRCUMSTANCES WOULD I BE ALLOWED TO GO.............5 → *PLACE G*	YES......1 NO 2
G	Public village gathering or community meeting				YES……1 NO ....2 → *PLACE H*	IF I HAVE COMPANY (RELATIVES, CHILDREN) ....1 IF I CAN ARRANGE MY OWN EXPENSES (FOR TRANSPORT)...................2 IF I FOLLOW PURDAH / DRESS ACCEPTABLY ....3 OTHER (SPECIFY) .... 4 UNDER NO CIRCUMSTANCES WOULD I BE ALLOWED TO GO.............5 → *PLACE H*	YES......1 NO 2
H	Training for NGO / programs				YES……1 NO .... → *PLACE I*	IF I HAVE COMPANY (RELATIVES, CHILDREN) ....1 IF I CAN ARRANGE MY OWN EXPENSES (FOR TRANSPORT)...................2 IF I FOLLOW PURDAH / DRESS ACCEPTABLY ....3 OTHER (SPECIFY) .... 4 UNDER NO CIRCUMSTANCES WOULD I BE ALLOWED TO GO.................→ *PLACE I*	YES......1 NO 2
I	Outside your community or village				YES……1 NO ....2 → *MODULE G7*	IF I HAVE COMPANY (RELATIVES, CHILDREN) ....1 IF I CAN ARRANGE MY OWN EXPENSES (FOR TRANSPORT)...................2 IF I FOLLOW PURDAH / DRESS ACCEPTABLY ....3 OTHER (SPECIFY) .... 4 UNDER NO CIRCUMSTANCES WOULD I BE ALLOWED TO GO.............5 → *MODULE G7*	YES......1 NO 2

	HOUSEHOLD ID					
	RESPONDENT ID					

MODULE G7: INTRAHOUSEHOLD RELATIONSHIPS

Now I'd like to ask you some questions about how you feel about some of other people in your household or family group and how you think they feel about you. **ENTER MEMBER ID FOR EACH RELATION** **OTHER CODES:** NON-HH MEMBER 94			Do you [NAME] respect your [RELATION]?	Does your [RELATION] respect you?	Do you trust your [RELATION] to do things that are in your best interest?	When you disagree with your [RELATION], do you feel comfortable telling him/her that you disagree?	**IS [RELATION] THE OTHER RESPONDENT WITHIN THIS HOUSEHOLD?**	Is there a co-wife within your household?
RELATION			**G7.02**	**G7.03**	**G7.04**	**G7.05**	**G7.06**	**G7.07**
A	Husband / wife	**ID #**	MOST OF THE TIME ....1 SOMETIMES ....2 RARELY ....3 NEVER 4	MOST OF THE TIME ....1 SOMETIMES....................2 RARELY............................3 NEVER 4	MOST OF THE TIME ....1 SOMETIMES....................2 RARELY............................3 NEVER...............................4	MOST OF THE TIME........... 1 SOMETIMES.....................2 RARELY.............................3 NEVER...............................4	YES......1 → *RELATION C* NO........2	
B	Other respondent within the household	**ID #**	MOST OF THE TIME ....1 SOMETIMES ....2 RARELY ....3 NEVER 4	MOST OF THE TIME ....1 SOMETIMES....................2 RARELY............................3 NEVER 4	MOST OF THE TIME ....1 SOMETIMES....................2 RARELY............................3 NEVER...............................4	MOST OF THE TIME........... 1 SOMETIMES.....................2 RARELY.............................3 NEVER...............................4		
C	**IF RESPONDENT IS MALE:** Father (or adapt this category to capture other important relationship) **IF RESPONDENT IS FEMALE:** Mother-in-law	**ID #**	MOST OF THE TIME ....1 SOMETIMES ....2 RARELY ....3 NEVER...............................4	MOST OF THE TIME ....1 SOMETIMES....................2 RARELY............................3 NEVER 4	MOST OF THE TIME ....1 SOMETIMES....................2 RARELY............................3 NEVER 4	MOST OF THE TIME........... 1 SOMETIMES.....................2 RARELY.............................3 NEVER.......................... 4*IF RESPONDENT IS MALE* → *MODULE G8(A)*		YES......1 NO.......2 → *MODULE G8(A)*
D	Most senior co-wife (the person who was in the household just before you, or, if you are the senior wife, the one who married into the household after you)	**ID #**	MOST OF THE TIME ....1 SOMETIMES ....2 RARELY ....3 NEVER.......................... 4	MOST OF THE TIME ....1 SOMETIMES....................2 RARELY............................3 NEVER.......................... 4	MOST OF THE TIME ....1 SOMETIMES....................2 RARELY............................3 NEVER.......................... 4	MOST OF THE TIME........... 1 SOMETIMES.....................2 RARELY.............................3 NEVER.......................... 4		

	HOUSEHOLD ID					
	RESPONDENT ID			

MODULE G8(A): AUTONOMY IN DECISION-MAKING

			Are you like this person? CIRCLE <u>ONE</u>	Are you completely the same or somewhat the same? CIRCLE <u>ONE</u>	Are you completely different or somewhat different? CIRCLE <u>ONE</u>
Now I am going to read you some stories about different farmers and their situations regarding different agricultural activities. This question format is different from the rest so take your time in answering. For each I will then ask you how much you are like or not like each of these people. We would like to know if you are completely different from them, similar to them, or somewhere in between. There are no right or wrong answers to these questions. READ ALOUD EACH STORY, SUBSEQUENT QUESTIONs, AND RESPONSE CODES. <mark>NAMES SHOULD BE ADOPTED TO LOCAL CONTEXT AND BE MALE/FEMALE DEPENDING ON THE SEX OF THE RESPONDENT. THE ORDER OF TOPICS A-D SHOULD BE RANDOMIZED, AND WITHIN EACH TOPIC, THE ORDER OF STORIES 1-4 SHOULD BE RANDOMIZED.</mark>					
STORY			G8.01	G8.02	G8.03
The types of crops to grow or raise for consumption and sale in market	A1	*"[PERSON'S NAME] cannot grow other types of crops here for consumption and sale in market. Beans, sweet potato and maize are the only crops that grow here."*	YES...1 NO.. 2 → *G8.03*	COMPLETELY THE SAME....1 → *A2* SOMEWHAT THE SAME.........2 → *A2*	COMPLETELY DIFFERENT ....1 SOMEWHAT DIFFERENT 2
	A2	*"[PERSON'S NAME] is a farmer and grows beans, sweet potato, and maize because her spouse, or another person or group in her community tells her she must grow these crops. She does what they tell her to do."*	YES...1 NO.. 2 → *G8.03*	COMPLETELY THE SAME....1 → *A3* SOMEWHAT THE SAME.........2 → *A3*	COMPLETELY DIFFERENT ....1 SOMEWHAT DIFFERENT 2
	A3	*"[PERSON'S NAME] grows the crops for agricultural production that her family or community expect. She wants them to approve of her as a good farmer."*	YES...1 NO.. 2 → *G8.03*	COMPLETELY THE SAME....1 → *A4* SOMEWHAT THE SAME.........2 → *A4*	COMPLETELY DIFFERENT ....1 SOMEWHAT DIFFERENT 2
	A4	*"[PERSON'S NAME] chooses the crops that she personally wants to grow for consumption and sale in market and thinks are best for herself and her family. She values growing these crops. If she changed her mind, she could act differently."*	YES...1 NO.. 2 → *G8.03*	COMPLETELY THE SAME....1 → *B1* SOMEWHAT THE SAME.........2 → *B1*	COMPLETELY DIFFERENT ....1 SOMEWHAT DIFFERENT 2
Livestock raising	B1	*"[PERSON'S NAME] cannot raise any livestock other than what she has. These are all that do well here."*	YES...1 NO.. 2 → *G8.03*	COMPLETELY THE SAME....1 → *B2* SOMEWHAT THE SAME.........2 → *B2*	COMPLETELY DIFFERENT ....1 SOMEWHAT DIFFERENT 2
	B2	*"[PERSON'S NAME] raises the types of livestock she does because her spouse, or another person or group in her community tell her she must use these breeds. She does what they tell her to do."*	YES...1 NO.. 2 → *G8.03*	COMPLETELY THE SAME....1 → *B3* SOMEWHAT THE SAME.........2 → *B3*	COMPLETELY DIFFERENT ....1 SOMEWHAT DIFFERENT 2
	B3	*"[PERSON'S NAME] raises the kinds of livestock that her family or community expect. She wants them to approve of her as a good livestock raiser."*	YES...1 NO.. 2 → *G8.03*	COMPLETELY THE SAME....1 → *B4* SOMEWHAT THE SAME.........2 → *B4*	COMPLETELY DIFFERENT ....1 SOMEWHAT DIFFERENT 2

			Are you like this person? CIRCLE ONE	Are you completely the same or somewhat the same? CIRCLE ONE	Are you completely different or somewhat different? CIRCLE ONE
	B4	*"[PERSON'S NAME] chooses the types of livestock that she personally wants to raise and thinks are good for herself and her family. She values raising these types. If she changed her mind, she could act differently."*	YES...1 NO.. 2 → *G8.03*	COMPLETELY THE SAME....1 → *C1* SOMEWHAT THE SAME.........2 → *C1*	COMPLETELY DIFFERENT ....1 SOMEWHAT DIFFERENT 2

READ ALOUD EACH STORY, SUBSEQUENT QUESTIONs, AND RESPONSE CODES. NAMES SHOULD BE ADOPTED TO LOCAL CONTEXT AND BE MALE/FEMALE DEPENDING ON THE SEX OF THE RESPONDENT.

STORY			G8.01	G8.02	G8.03
Taking crops or livestock (incl. eggs or milk) to the market (or not)	**C1**	*"There is no alternative to how much or how little of her crops or livestock [PERSON'S NAME] can take to the market. She is taking the only possible amount."*	YES...1 NO.. 2 → *G8.03*	COMPLETELY THE SAME....1 → *C2* SOMEWHAT THE SAME.........2 → *C2*	COMPLETELY DIFFERENT ....1 SOMEWHAT DIFFERENT 2
	C2	*"[PERSON'S NAME] takes crops and livestock to the market because her spouse, or another person or group in her community tell her she must sell them there. She does what they tell her to do."*	YES...1 NO.. 2 → *G8.03*	COMPLETELY THE SAME....1 → *C3* SOMEWHAT THE SAME.........2 → *C3*	COMPLETELY DIFFERENT ....1 SOMEWHAT DIFFERENT 2
	C3	*"[PERSON'S NAME] takes the crops and livestock to the market that her family or community expect. She wants them to approve of her."*	YES...1 NO.. 2 → *G8.03*	COMPLETELY THE SAME....1 → *C4* SOMEWHAT THE SAME.........2 → *C4*	COMPLETELY DIFFERENT ....1 SOMEWHAT DIFFERENT 2
	C4	*"[PERSON'S NAME] chooses to take the crops and livestock to market that she personally wants to sell there, and thinks is best for herself and her family. She values this approach to sales. If she changed her mind, she could act differently."*	YES...1 NO.. 2 → *G8.03*	COMPLETELY THE SAME....1 → *D1* SOMEWHAT THE SAME.........2 → *D1*	COMPLETELY DIFFERENT ....1 SOMEWHAT DIFFERENT 2
How to use income generated from agricultural and non-agricultural activities	**D1**	*"There is no alternative to how [PERSON'S NAME] uses her income. How she uses her income is determined by necessity."*	YES...1 NO.. 2 → *G8.03*	COMPLETELY THE SAME....1 → *D2* SOMEWHAT THE SAME.........2 → *D2*	COMPLETELY DIFFERENT ....1 SOMEWHAT DIFFERENT 2
	D2	*"[PERSON'S NAME] uses her income how her spouse, or another person or group in her community tell her she must use it there. She does what they tell her to do."*	YES...1 NO.. 2 → *G8.03*	COMPLETELY THE SAME....1 → *D3* SOMEWHAT THE SAME.........2 → *D3*	COMPLETELY DIFFERENT ....1 SOMEWHAT DIFFERENT 2
	D3	*"[PERSON'S NAME] uses her income in the way that her family or community expect. She wants them to approve of her."*	YES...1 NO.. 2 → *G8.03*	COMPLETELY THE SAME....1 → *D4* SOMEWHAT THE SAME.........2 → *D4*	COMPLETELY DIFFERENT ....1 SOMEWHAT DIFFERENT 2
	D4	*"[PERSON'S NAME] chooses to use her income how she personally wants to, and thinks is best for herself and her family. She values using her income in this way. If she changed her mind, she could act differently."*	YES...1 NO.. 2 → *G8.03*	COMPLETELY THE SAME...1→*G8.04* SOMEWHAT THE SAME....2 →*G8.04*	COMPLETELY DIFFERENT ....1 SOMEWHAT DIFFERENT 2

MODULE G8(B): NEW GENERAL SELF-EFFICACY SCALE

Now I'm going to ask you some questions about different feelings you might have. Please listen to each of the following statements. Think about how each statement relates to your life, and then tell me how much you agree or disagree with the statement on a scale of 1 to 5, where 1 means you "strongly disagree" and 5 means you "strongly agree." **(Note: Randomize order of statements)**

STATEMENTS		G8.04
A	I will be able to achieve most of the goals that I have set for myself.	STRONGLY DISAGREE .... 1 DISAGREE .... 2 NEITHER AGREE NOR DISAGREE .... 3 AGREE .... 4 STRONGLY AGREE 5
B	When facing difficult tasks, I am certain that I will accomplish them.	STRONGLY DISAGREE .... 1 DISAGREE .... 2 NEITHER AGREE NOR DISAGREE .... 3 AGREE .... 4 STRONGLY AGREE 5
C	In general, I think that I can obtain outcomes that are important to me.	STRONGLY DISAGREE .... 1 DISAGREE .... 2 NEITHER AGREE NOR DISAGREE .... 3 AGREE .... 4 STRONGLY AGREE 5
D	I believe I can succeed at most any endeavor to which I set my mind	STRONGLY DISAGREE .... 1 DISAGREE .... 2 NEITHER AGREE NOR DISAGREE .... 3 AGREE .... 4 STRONGLY AGREE 5
E	I will be able to successfully overcome many challenges.	STRONGLY DISAGREE .... 1 DISAGREE .... 2 NEITHER AGREE NOR DISAGREE .... 3 AGREE .... 4 STRONGLY AGREE 5
F	I am confident that I can perform effectively on many different tasks.	STRONGLY DISAGREE .... 1 DISAGREE .... 2 NEITHER AGREE NOR DISAGREE .... 3 AGREE .... 4 STRONGLY AGREE 5
G	Compared to other people, I can do most tasks very well.	STRONGLY DISAGREE .... 1 DISAGREE .... 2 NEITHER AGREE NOR DISAGREE .... 3 AGREE .... 4 STRONGLY AGREE 5
H	Even when things are tough, I can perform quite well.	STRONGLY DISAGREE .... 1 DISAGREE .... 2 NEITHER AGREE NOR DISAGREE .... 3 AGREE .... 4 STRONGLY AGREE 5

MODULE G8(C): LIFE SATISFACTION

The following questions ask how satisfied you feel with your life as a whole, on a scale from 1 to 5, where 1 means you feel "very dissatisfied" and 5 means you feel "very satisfied."

	STATEMENTS	G8.05
A	Overall, how satisfied are you with life as a whole these days?	VERY DISSATISFIED...1 DISSATISFIED ....2 NEITHER SATISFIED NOR DISSATISFIED ....3 SATISFIED..4 VERY SATISFIED 5
B	Overall, how satisfied with your life were you 5 years ago?	VERY DISSATISFIED...1 DISSATISFIED ....2 NEITHER SATISFIED NOR DISSATISFIED ....3 SATISFIED..4 VERY SATISFIED 5
C	As your best guess, overall how satisfied with your life do you expect to feel 5 years from today?	VERY DISSATISFIED...1 DISSATISFIED ....2 NEITHER SATISFIED NOR DISSATISFIED ....3 SATISFIED..4 VERY SATISFIED 5

HOUSEHOLD ID						
RESPONDENT ID			

MODULE G9. Attitudes about Domestic Violence

Now I would like to ask about your opinion on the following issues. Please keep in mind that I am not asking about your personal experience or whether the following scenarios have happened to you. I would only like to know whether you think the following issues are acceptable.	In your opinion, is a husband justified in hitting or beating his wife in the following situations?
SITUATION	**G9.01**
A If she goes out without telling him?	YES..1 NO ....2 DON'T KNOW 97
B If she neglects the children?	YES..1 NO ....2 DON'T KNOW 97
C If she argues with him?	YES..1 NO ....2 DON'T KNOW 97
D If she refuses to have sex with him?	YES..1 NO ....2 DON'T KNOW 97
E If she burns the food?	YES..1 NO ....2 DON'T KNOW 97

END OF QUESTIONAIRE. FILL OUT COVER PAGE OUTCOME

G1.05.

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