

Foreword

The CARE FWS team runs a periodic ‘Research Digest’ informed by CARE’s Right to Food, Water, and Nutrition (RFWN) learning agenda which focuses on generating, analyzing, and presenting evidence and on expanding the impact of that evidence – both for program quality and influencing purposes. The purpose of these Research Digests is to increase awareness and understanding of our research across all teams within FWS and more broadly within CARE. The Digest will capture and summarize evidence from CARE programming on food and water systems as well as external evidence relevant to our programming and priorities.

With 69 countries involved in action research and programming, a wide range of issues will be covered in this and future issues- informed by input from country offices and technical teams. There is intensified southern partner engagement in our research and learning space with more evidence being generated. This initiative aims to open space for such research and bring visibility and recognition to our partners.

In this second issue of the RFWN Research Digest, you will find summaries of both qualitative and quantitative research covering a broad range of topics from WASH, food safety, and livestock, to climate smart agriculture, increasing resilience, and nutrition, with themes of gender equality woven throughout. The research included in this issue covers a wide range of geographies with several globally focused pieces, and pieces focused on Western Africa, Eastern Africa, and India. Each summary provides essential background information of the research, including the methodology and research objectives, along with key findings and implications of the research, tailored to inform future projects and research of similar focus and methods.

The purpose of this Digest is to be a reflection and decision-making tool for YOU! Do you find it useful? What else you would like to add for further editions? Any comments or suggestions? Please write directly to maureen.miruka@care.org and emma.smith@care.org. We look forward for your feedback!



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CARE Research



Women's Empowerment and Livestock Vaccination: Evidence from Peste des Petits Ruminants Vaccination Interventions in Northern Ghana

Project and Research Partners: The project was conducted in partnership between CARE International, International Livestock Research Institute, and CowTribe.

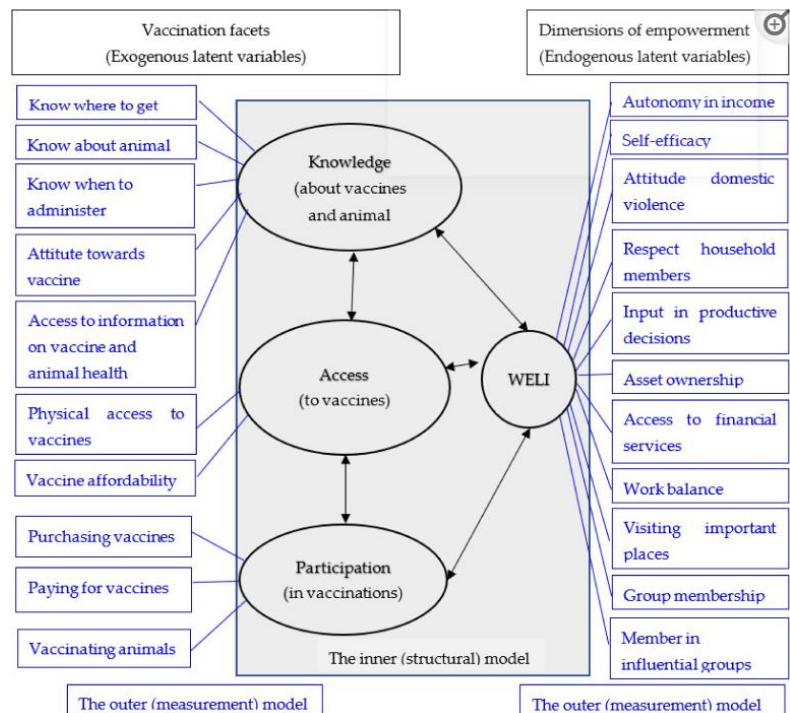
Background: Livestock provides an important source of income, food, and opportunities for livelihoods, especially for rural women. However, women often face restrictions on their mobility and access to vaccinations needed to maintain and care for their livestock. Thus, reducing the barriers for women to access knowledge, supplies, and resources for effective animal vaccination provides an important avenue to increase women's empowerment, while on the other hand, further empowering women will increase the adoption of animal vaccination practices.

Research Aim: This study aims to provide a better understanding of the relationship between women farmer's engagement in Peste des Ruminant, a viral disease of sheep and goats, vaccination and their empowerment by examining knowledge about animal health and vaccines, access to Peste des Petits Ruminants vaccines, and participation in vaccination.

Methodology: This research was conducted by operationalizing indicators from the Women's Empowerment in Livestock Index (WELI) tool for analysis of the WomenRear project's 2021 household survey. This research included 465 women and 92 men in rural goat-keeping households in the Bawku West District and Pusiga District in the Upper East Region of Ghana.

Key Findings:

- Small ruminants were viewed by more women than men to be important for their household's livelihoods. However, both women and men viewed small ruminants and chickens as the two most important livestock species for their own livelihood.
- There is a highly significant ($p < 0.05$) positive association between knowledge of vaccines and animal health and women ($\beta = 0.11$, $p = 0.045$) and men's ($\beta = 0.32$, $p = 0.000$) empowerment. Additionally, there were significant links between women's empowerment and farming experience, and women's access to knowledge and empowerment in seed systems, while only an indirect link was found between women's empowerment and access to vaccines.
- No direct links were found between women's empowerment and participation in vaccination. This may be caused by the increased labor and financial burdens on women when they participate in activities to acquire vaccines for animals, which may involve traveling to the vaccinator or paying the costs of vaccines. Interventions that aim to increase women's participation in the vaccination process may have the opposite effect of the intended impacts and decrease women's empowerment.
- Men's empowerment was strongly linked to control of income and decision-making in agricultural production, while women's empowerment was strongly linked to asset ownership and decision-making in livestock production.



Conceptual model for evaluating the relationship between empowerment dimensions and vaccination facets.

Implications and Learnings:

- Policies aimed to increase women's empowerment through the animal vaccination system should consider both women's knowledge of and access to vaccines, as both are necessary to increase the empowerment of women.
- Future programs aimed to empower women through animal vaccination must increase women's ownership and decision-making abilities of livestock value chains beyond just participation. However, interventions should also consider context-specific cultural norms that may lead to unintended negative consequences from women's increased ownership of livestock assets.
- Additional studies are required to explore the relationship between livestock production systems and household dynamics to increase the understanding of existing practices and norms. Furthermore, similar studies should be replicated in other low- and middle-income countries beyond Ghana to establish and better overall understanding. A longitudinal study to examine the causal relationship between women's empowerment and animal vaccination is also recommended.

For more information, please see: [Women's Empowerment and Livestock Vaccination: Evidence from Peste des Petits Ruminants Vaccination Interventions in Northern Ghana](#)



WHAT ARE THE CHALLENGES FACED BY P.A.C.E TRAINERS? A CASE STUDY OF THE WOMEN+WATER ALLIANCE PROGRAM

Project and Research Partners: CARE India joined the Women + Water Alliance, funded by USAID and Gap Inc., as an implementing partner for the Personal Advancement and Career Enhancement (P.A.C.E) program, funded Gap Inc.

Background: The P.A.C.E program employs trainers to teach core modules on communication, problem-solving, decision-making, and time and stress management. CARE has incorporated WASH modules into the curriculum and adopted it for rural Indian contexts.

Research Aim: This research was conducted to determine the challenges that facilitators, particularly women, face within the P.A.C.E program.

Methodology: Interviews were conducted based on a randomized list of male and female trainers over the phone. The interviews lasted between 30-60 minutes each and were either recorded and later transcribed, or answers were written down throughout the interview.

Key Findings:

- Interview participants agreed that female facilitators are typically more effective in the P.A.C.E program. Female facilitators can connect more easily with female participants, especially on topics specific to women- menstruation, birth control, gender norms etc., that male facilitators may be uncomfortable discussing. However, female facilitators do face challenges is leading male-engagement sessions.
- Barriers to hiring female facilitators included lack of family support, safety concerns when traveling outside the village or at night, traditional beliefs around women's work outside the home, low awareness of job opportunities, lack of transportation, and late hours conflicting with traditional household responsibilities. Female facilitators also experienced more safety disturbances during P.A.C.E sessions, often during sessions without a male facilitator. These challenges resulted in only 30% of trainers being women at the height of the W+W program.
- More general challenges for both male and female facilitators included a lack of a consistent. functional venue, large group sizes, long sessions, and sessions being held late at night.

Implications and Learnings: The recommendations made in this research based on the challenges observed for facilitators in the P.A.C.E program can be applied more broadly to CARE programs which use community-based facilitators.

- Increased safety protocols, especially at night or in emergency situations, need to be developed. These can include better access to transportation, identification cards to establish legitimacy, training venues that have the necessary amenities, and pairing male and female facilitators to decrease changes of harassment and increase safety.

- Trust must be established within host communities before trainings, with occasional opportunities for those not involved with projects to participate.
- Learning groups should be smaller and increase the use of videos within learning tools to increase overall engagement.
- Given women facilitator's ability to connect with participants on effective topics, programs working on women's empowerment must prioritize hiring female facilitators and to address the unique challenges they face- including gender and social norms. This can be done through increased visibility of job openings, benefits, such as childcare, healthcare, transportation, and additional trainings, encouragement for women, and engaging men on exclusionary social norms.

For more information, please see: [W+W India trainers brief 4 April 2023.pdf](#) or contact Kelly Alexander (Kelly.Alexander@care.org)



IDENTIFICATION OF SUITABLE LAND FOR SUPPLEMENTAL SURFACE IRRIGATION IN SEMI-ARID AREAS OF NORTH-WESTERN ETHIOPIA

Project and Research Partners: This research was funded by the Women's Empowerment and Environmental Protection (SWEEP) project granted by CARE Ethiopia and Water for Food Security.

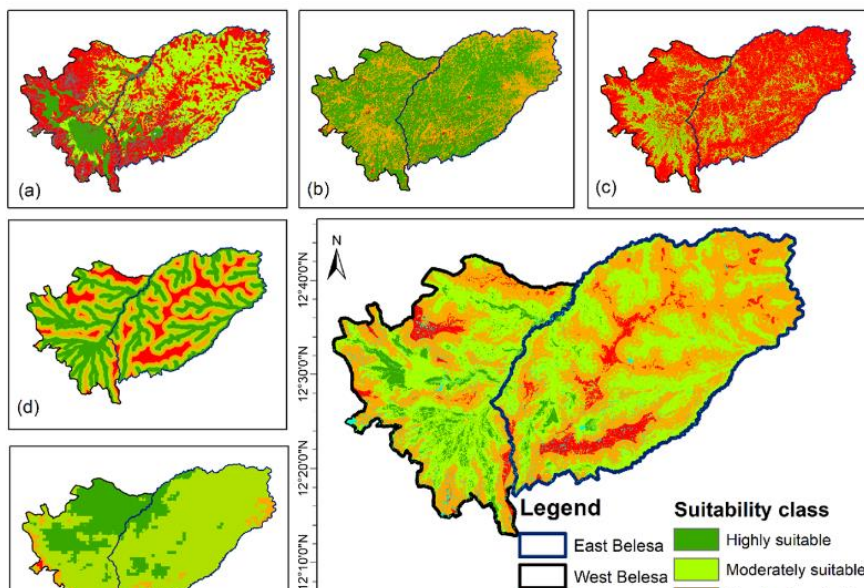
Background: Much of the population in the Horn and sub-Saharan regions of Africa rely heavily on rainfed agriculture to support their livelihoods. Recurrent drought conditions and rainfall variability, driven by climate change, have resulted in widespread crop failure, food insecurity, and the displacement of large populations. Effective water resource planning and development, including irrigation to supplement rainfall, is needed to protect vulnerable populations by improving crop production and combatting food insecurity.

Research Aims: The goal of this study is to identify potential areas for supplemental irrigation based on water availability, slope, soil capacity index (SCI), and land use.

Methodology: A geographic information system (GIS)-based multi-criteria evaluation (MCE) technique was used in conjunction with existing meteorological, environmental, and hydrological datasets to assess land based on soil suitability, land use suitability, slope suitability, river proximity, and effective rainfall to identify land suitable for supplemental irrigation. The areas of study were in the East and West Belesa districts of Ethiopia.

Key Findings:

- The proximity of water sources, such as rivers and streams, is the most important factor in determining whether land will be suitable for supplemental irrigation (weighted 32%), as without access to water. The development of irrigation systems would be impossible.
- The slope of the land was also found to be a significant determinant of whether land was suitable for supplemental irrigation (weighted 33%). Land with flat and gentle slopes near streams are the most suitable for supplemental irrigation;



Sustainability maps of (a) soil capacity index, (b) land use, (c) slope, (d) river proximity, (e) effective rainfall, and (f) general suitability of land for supplementary irrigation in the two Belesa districts before validation.

however, given the rough topography of the areas studied, the majority of the study areas were not suitable for supplemental irrigation.

- The soil capacity index (SCI) is also important for determining suitability for supplemental irrigation (weighted 16%). Soil with physicochemical qualities, including water-holding capacity, salinity, acidity, and alkalinity, should be available on agricultural land, especially that considered for supplemental irrigation.
- Effective rainfall (weighted 11%) and land use (weighted 8%) were less important considerations.

Implications and Learnings:

- Supplemental irrigation is an important tool to improve crop production and food security in areas with low rainfall. The use of supplemental irrigation measures should be expanded into agricultural interventions beyond the highlands of Ethiopia, where the conditions are suitable, to increase resilience against climate change-related shocks and maximize the efficiency of water usage.
- Supplemental irrigation can complement other forms of water resource management, such as earthen dams, to more efficiently and effectively provide water for a multitude of uses, including drinking water for humans and livestock, and irrigation.
- CARE can replicate and improve these research methods through enhanced spatial and temporal data with hydrological boundaries to determine other areas suitable for supplemental irrigation interventions. Additionally, further research should take gender into consideration through the study design and implementation given that land is a resource shared within households and women's difficulty in accessing land.

For more information, please see: [Identification of Suitable Land for Supplemental Surface Irrigation in Semi-Arid Areas of North-Western Ethiopia](#)



INVESTIGATING THE CAUSAL IMPACT OF THE STRENGTHENING PSNP4 INSTITUTIONS AND RESILIENCE (SPIR) MULTI-SECTORAL “GRADUATION MODEL”

Project and Research Partners: International Food Policy Research Institute (IFPRI), Hawassa University, Ambo University, Teachers College at Columbia University, Johns Hopkins University, World Vision, CARE

Background: Strengthen PSNP4 (fourth phase of the Productive Safety Net Program) Institutions and Resilience (SPIR) Development Food Security Activity (DFSA) was a five-year project conducted from 2016 to 2021 in Ethiopia. Key approaches within the program included Village Economic and Social Associations (VESAs), male engagement groups, integrating Social Analysis and Action and nutrition into VESAs, aspiration videos, interpersonal therapy sessions and phone calls, and Cash and Voucher Assistance (CVA). These interventions were aimed to enhance livelihoods, increase resilience to shocks, and improve food security and nutrition for rural households vulnerable to food insecurity.

Research Aims: The aim of this study was to measure the causal impact of the SPIR project's multi-sectoral “graduation model” packages of livelihoods, nutrition, gender equity, and mental health interventions. These interventions were conducted with the goal of improving outcomes in the areas of livelihoods, food security, child nutrition, women's empowerment, mental health, and intimate partner violence.

Methodology: This impact evaluation used a clustered randomized controlled trial (RCT) design with four intervention arms—three treatments and a control group, to test the effectiveness of these packages to improve outcomes for participants in the fourth phase of the Productive Safety Net Program.

Key Findings:

- Only 1.5% of participants in the SPIR project graduated out of poverty. This may indicate that relative to the BRAC asset transfers of \$1,200 in Ethiopia, the \$200 transfer within SPIR is not enough to help people move out of poverty.
- Village Economic and Social Associations (VESAs) and Savings Groups had the highest uptake of activities in the SPIR program—reaching 80-86% of participants, with 75% frequently participating in VESAs (compared to 8% of people participating in producer groups). 75% of VESAs have at least some women leaders—the only improvement

in women's agency within the project. However, people who participated in VESAs without any asset transfer only benefitted from savings and VESAs but did not experience any improvements in income, assets, or livestock.

- Throughout the duration of the project, people within the program were 30 percentage points more likely to have savings than the control group, increasing by up to \$7.45 (400 birr) in treatment groups versus the control group. Women involved in the project were 13-15 percentage points more likely to have their own savings, with extremely poor women averaging \$6.52 (350 birr) more savings than the control.
- Although not usually taken into consideration, the cost in money and time of participants to participate in the SPIR program was assessed. For example, participating in a VESA cost \$0.08 in travel costs and 21 minutes of travel time and value chain trainings cost \$0.39 and 34 minutes. Additionally, 46% of households spent more than half a day and 8% spent more than a day to get a cash/asset transfer.
- People who got chickens saw a 25% increase in their poultry flocks and were 10 percentage points more likely to get income from poultry sales, women saw increases in their poultry income increase by 15-10 percentage points and up to 15 percentage points for extremely poor women.
- Men who received Social Analysis and Action and Male Engagement Trainings were 7 percentage points more likely to support women's ability and to be engaged in household chores, this increase was up to 11.8 percentage points for men in the extremely poor category.
- Improvements to mental health were only found in extremely poor households when cash and asset transfers in the form of poultry were provided. Marital dynamics and Intimate Partner Violence (IPV) were not impacted by the SPIR interventions for less poor households, and in some cases, marital relations worsened and IPV increased in extremely poor household that received poultry from the SPIR project.

Implications and Learnings:

- Larger in-kind or cash transfers are necessary in order to help more households access a sustainable path out of poverty. Additionally, approaches such as VESAs offer a platform for saving. Programs should explore how to improve access to credit and formal financing.
- To improve women's agency and promote gender equality without creating unintended negative consequences, engaging men and boys is necessary. This is most effective when multiple approaches are used, such as Male Engagement Trainings and Social Analysis and Action.
- Gaps in coverage of nutritional service delivery should be identified to increase access to nutritious foods and improve uptake of complementary feeding practices. Additionally, messaging on weaning and the importance of dietary diversity should be improved to prevent stunting and reduce the prevalence of underweight children.
- Improvements to mental health are largely reliant on cash and asset transfers to extremely poor households. Future studies should examine how these improvements can be expanded to less poor households and develop sustainable approaches to addressing mental health. Furthermore, approaches should take social and cultural contexts into consideration to prevent increases in Intimate Partner Violence or worsening marital relations.
- This study publication was extremely long and technically complicated. In future research publications need to ensure that practical impacts and implications for future work are clearly showcased and easily understood by any reader.

For more information, please see: [Impact Evaluation of the Strengthen PSNP4 Institutions and Resilience \(SPIR\) Development Food Security Activity \(DFSA\): Endline Report](#)

External Research



UNDERNOURISHED AND OVERLOOKED: A GLOBAL NUTRITION CRISIS FOR ADOLESCENT GIRLS AND WOMEN

Project and Research Partners: This research was conducted by the United Nations Children’s Fund (UNICEF).

Background: Women and adolescent girls suffer from heightened rates of undernutrition, micronutrient deficiencies, and anemia. This leads to diminished life opportunities, increased susceptibility to infection, and a greater risk of complications during pregnancy and childbirth. Poor maternal nutrition has severe consequences for infants and children as well, including an increased risk of stillbirth, impaired fetal development, and even newborn death.

Research Aims: The research aimed to understand current trends, inequalities, and the nutritional status of adolescent girls and women of the reproductive age. Additionally, the research examines the causes of malnutrition and the barriers that women and girls face in accessing nutritious diets.

Methodology: Data from national surveys, regional reviews, and NutriDash- UNICEF’s global online monitoring platform for maternal and child nutrition, was analyzed, representing more than 90% of adolescent girls and women globally.

Key Findings:

- With more than one billion adolescent girls and women suffering from undernutrition, no region is on track to meet the 2030 global targets of reducing anemia by half and low birthweight by 30%.
- 68% of underweight and 60% of anemic women and adolescent girls live in South Asian and sub-Saharan Africa. Those living in rural areas and less educated women and girls are at an even higher risk of undernutrition and anemia.
- Poor nutrition is generational as maternal undernutrition is a consistent predictor for stunting and wasting in early childhood. Globally, 51 million children are stunted, and it is estimated that about half become stunted during pregnancy or the first six months of life.
- Women and adolescent girls face disproportionate impacts of conflict, climate change, and poverty. The ongoing global food crisis has more than doubled the gender gap in food insecurity.
- Women and adolescent girls struggle to access nutritious diets, often as a result of harmful gender and social norms. Nutrition services fail to meet the needs of women and girls, especially those living in humanitarian crisis settings.
- Few countries have all of the policies, or even half, that are needed to improve nutrition. This is often driven by a lack of data and evidence.

Implications and Learnings:

- Advocacy efforts targeting governments to improve the nutritional statuses of adolescent girls and women must be driven by data and evidence. Greater investment in surveys, research, and evaluations is needed to inform policies around nutrition services and track progress.
- Governments must provide incentives and subsidies to improve access to and affordability of healthy foods. Additionally, governments can use policies and legal frameworks to create environments which encourage healthy foods.
- Access to essential nutrition services and social transfer programs, especially for pregnant and breastfeeding women and adolescent girls, is necessary to promote nutritious and diverse diets, including in humanitarian settings.
- Increased coverage of nutrition communications and counselling services are needed to enable women and adolescent girls to make informed decisions to improve their nutritional intakes.
- Given the heightened risk of undernutrition and anemia for women and adolescent girls, gender equality policies and laws to combat discriminatory gender and social norms are necessary to enable the full realization of the right to nutritious food.
- Overall, CARE must advocate to governments for stronger policies and legal processes, specifically targeting the access and affordability of nutritious foods to reduce undernutrition and anemia in women and adolescent girls.

For more information, please see: [Undernourished and Overlooked](#)



GENDER-BASED VIOLENCE: RELEVANCE FOR FISHERIES PRACTITIONERS

Project and Research Partners: The research was conducted by Sangeeta Mangubhai et al, in partnership with the Climate Society and Environment Research Centre at the University of Technology in Sydney, Australia.

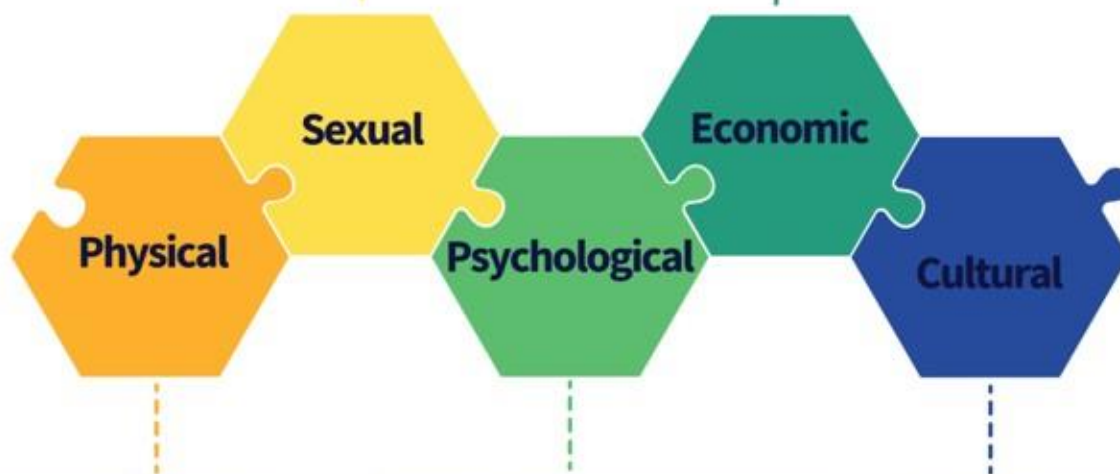
Background: Fisheries and aquaculture provide food, nutrition security, and livelihoods for approximately 1 billion people, mainly in the Global South. To work towards the 2030 Sustainable Development Goal (SDG) 14, which focuses on Life Below Water, it is necessary to consider the social aspects, including gendered dimensions, of fisheries. Although attention to the gender dynamics of fisheries has increased, there has been little focus on the intersection of gender-based violence (GBV) and fisheries.

Research Aim: This research aims to build a better understanding of the intersections of GBV and fisheries, and the need to address GBV within fisheries by outlining the roles and responsibilities of fisheries practitioners.

Methods: Five GBV types- physical, sexual, psychological, economic, and cultural, have been adopted and applied to fisheries. Using these GBV types, a scoping review was conducted to synthesize evidence of GBV within formal and informal fisheries to build a better understanding of the need to address GBV within fisheries.

Sexual violence is the forcing of a person or group of people to take part in any sexual act against their will, when they do not give consent or cannot give consent (e.g. child or a person who is intoxicated or unconscious).

Economic violence is making or attempting to make a person financially dependent by maintaining total control over financial resources, withholding access to money, and/or forbidding attendance at school or employment.



Physical violence is the physical hurting of another individual or groups of individuals. It includes denying of medical care or forcing drug use or the drinking of alcohol, and intentional physical damage to a person's property.

Psychological violence is the causing of fear through intimidation, threatening physical harm, forcing isolation from family or friends, and can include the destruction of property. This includes coercive control where a person is made to feel scared and isolated through manipulation and intimidation.

Cultural violence is any aspect of culture (exemplified by religion, ideology, language and art) that justifies or legitimises violence.

Figure 1: Definitions of the five types of gender-based violence relevant to capture fisheries—physical, sexual, psychological, economic (UN Women, 2020) and cultural (Galtung, 1990).

Key Findings:

- Physical GBV in fisheries emerged in human trafficking through forced labor and slavery, substance abuse-related violence, violence associated with compliance and surveillance, and child labor.
- Sexual GBV in fisheries was associated with transactional sex and prostitution, human trafficking, including sex slavery, and sexual harassment.
- Psychological GBV was associated with all other forms of violence but also included abuse of vulnerabilities and the retaining of personal identifying documents, such as passports.

- Economic GBV occurred when earnings were taken from victims and the deceptive living and working conditions, especially in long-haul fishing boats. Economic GBV is perpetuated by poverty and limited economic returns and also goes on to perpetuate poverty itself.
- Cultural GBV was associated with social norms which normalize violence against women or strict attitudes towards work and responsibilities, often relying on children to engage in work within the fisheries sector.

Implications and Learnings: To address GBV in the fisheries sector and to increase the recognition of these issues, the following recommendations are made:

- Remove gender blindness and bias by investing in gender equality approaches within the fisheries sector.
- Form strategic partnerships between fisheries authorities and gender experts to safeguard against GBV and with multi-national organizations to tackle GBV, especially child labor in the industry.
- Improved policies must be put in place, as well as increased coordination between authorities, to prevent GBV by tackling the root causes and protect against GBV by putting measures in place to protect workers. Better data collection is key to informing these policies and practices.
- Increased investment in labor rights and laws is needed to ensure the recognition of rights of workers, including collective bargaining, non-discrimination, eradication of forced labor, and elimination of child labor.
- Programs targeting fisheries must integrate gender into both program design and implementation, including risk assessment and social safeguarding. These programs must be mindful of cultural and social norms in implementing areas as well.
- Specific programs for women must be created to build their confidence and empower women in the fisheries sector. Additionally, specific programs for men are needed to create healthy models of masculinity.
- As CARE works to expand the Farmer Field and Business School (FFBS) framework into further sectors, including pastoralists and fisheries, the findings of this report can be used to inform program objectives and advocacy efforts to tackle GBV in fisheries.

For more information, please see: [Gender-based violence: Relevance for fisheries practitioners](#)



A REVIEW OF THE ROLES OF MEN, WOMEN, AND YOUTH IN ENSURING FOOD SAFETY IN THE SMALLHOLDER POULTRY VALUE CHAIN IN KENYA

Project and Research Partners: This report was authored by Ariel Garsow, Erica Kim, Kathleen Colverson, et al., and funded by the United States Agency of International Development (USAID).

Background: Poultry farming contributes largely to the Kenyan national economy (30% of national agricultural Gross Domestic Product (GDP) and 7.8% of total GDP). However, foodborne diseases (FBD) are more prevalent in African countries than non-African regions. Gender roles are associated with the health risks within poultry production as women often have less decision-making capacity to enforce food safety measures than men and women often are at greater risk from foodborne pathogens. Additionally, youth play an important role in poultry production but are often overlooked in training on safe poultry production.

Research Aims: Poultry farming contributes largely to the Kenyan national economy (30% of national agricultural Gross Domestic Product (GDP) and 7.8% of total GDP). However, foodborne diseases (FBD) are more prevalent in African countries than non-African regions. Gender roles are associated with the health risks within poultry production as women often have less decision-making capacity to enforce food safety measures than men and women often are at greater risk from foodborne pathogens. Additionally, youth play an important role in poultry production but are often overlooked in training on safe poultry production.

Methodology: A literature review of the fields of food safety, gender and youth, poultry production, and smallholder poultry producers in Kenya was conducted using 14 electronic databases.

Key Findings:

- In production and poultry rearing, women and youth play key roles in care and keeping of poultry and spend more time engaged in these activities daily. When implementing farm management interventions, adoption varied by gender with women being less likely to adopt all interventions, often due a lack of resources.
- In the processing of poultry, smallholder farmers typically do not have access to hygienic slaughtering facilities and slaughtering is commonly done at home, often leading to cross-contamination.
- Transportation of poultry is typically done by men, women, and youth but more commonly by men in commercial settings. However, unsafe practices, such as unsanitary vehicles and baskets, densely packing and mixing animal species, and not feeding birds before sale creates a higher risk for the spread of foodborne diseases.
- The sale of poultry products provides important income generating opportunities for women and youth, as well as increased decision-making over income, control of resources, and overall empowerment. However, unsafe handling, retail, and sale of poultry can increase the risk of bacterial contamination for those engaged in these activities, often women and youth.
- Women and female youth often consume lower quality and less meat than men or guests, despite the importance of proper nutrition consumption, especially by pregnant and lactating women and growing female youth. Cultural myths also influence which parts of the poultry are consumed and by who, leading to decreased nutritional consumption by women and girls.

Implications and Learnings:

- As CARE is working to develop food safety interventions, considerations must be made regarding who is conducting activities along the poultry value chain. Food safety management practices must keep in mind the determinants of adoption and be made accessible to target populations, including at times when women and youth are available for trainings. Access to finance and trainings addressing social norms will also help women and youth to engage in the poultry value chain.
- CARE has experience implementing Producer and Marketing Groups within programs and can tailor these learnings and approached to create poultry producer associations. Additionally, by leveraging the resources of these groups, CARE can work with established slaughterhouses to increase food safety practices by increasing knowledge and oversight of safe processing practices, and to amplify women's roles in this end of the value chain.
- Food safety practices during transportation must be incorporated within programming to help to increase the profits earned by smallholder poultry producers. Additionally, safe practices during retail and sales will reduce the transmission of diseases and provides opportunities for empowerment for women and youth by increasing decision-making capacities and control of income.
- Nutrition interventions should be incorporated within programming to promote the consumption of higher qualities and qualities of chicken products by women and children in communities. Additionally, social and behavior change interventions are needed to combat myths surrounding the consumption of poultry and common practices of men eating more and better-quality meat.

For more information, please see: [A Review of the Roles of Men, Women, and Youth in Ensuring Food Safety in the Smallholder Poultry Value Chain in Kenya](#)



RUSSIA-UKRAINE WAR AND THE GLOBAL CRISIS: IMPACTS ON POVERTY AND FOOD SECURITY IN DEVELOPING COUNTRIES

Project and Research Partners: Research conducted by the International Food Policy Research Institute (IFPRI).

Background: The ongoing war between Russia and Ukraine, in addition to the sanctions imposed on Russia and export bans due to concerns regarding commodity shortages, have driven food, fuel, and fertilizer prices higher across the world. Although some prices of commodities have begun to decrease again, there are still high levels of concerns within developing countries on the implications that the price increases might have on economic stability, food security, and poverty.

Research Aims: This study aims to understand the likely impacts of real price changes experienced between June 2021 and April 2022 on the economies of developing countries, specifically as it related to food security and diets, poverty, household consumption, agrifood systems, and populations.

Methodology: A series of economywide models were used to examine country-specific data of 19 developing countries between June 2021 and April 2022. These 19 countries were Bangladesh, Cambodia, the Democratic Republic of the Congo, Egypt, Ethiopia, Ghana, Kenya, Mali, Malawi, Myanmar, Niger, Nigeria, Nepal, Philippines, Rwanda, Senegal, Tanzania, Uganda, and Zambia.

Key Findings:

- Global price shocks reduced total GDP by more than 1% in only 6 countries but reduced the agrifood system GDP by more than 1% in 10 countries. In general, fuel price increases resulted in the largest losses in GDP, followed by increases in fertilizer prices and resulting losses in productivity, although these price shocks had different impacts on various aspects of the value chain.
- Household consumption fell more than GDP due to the combination of rising prices and falling incomes in all of the 19 countries examined. 39% of the rural household consumption loss was due to fertilizer price shocks, compared to 18% in urban households. However, fuel price shocks contributed to 59% of urban household consumption losses, compared to 44% of rural households.
- Global price shocks led to an additional 27.2 million people falling below the poverty line (USD \$1.90 a day) in all the countries examined. Of the 27.2 million around 72% of people live in rural areas.
- Prevalence of undernourishment rose in all 19 countries, totaling an additional 22.3 million people, 66% living in rural areas, becoming undernourished. Rising food prices contributed to 68% of the increase in undernourishment in urban areas, while higher fertilizer prices contributed to 44% of the undernourishment in rural areas.
- Dietary diversity has decreased as a result of declines in disposable incomes, increases in the relative price of food, and changes in the costs of different food groups leading to changing consumption patterns. Overall, 70% of those with worsened diets live in rural areas, with food price increases being the largest contributor, accounting for 72% of the changes in rural households and 85% in urban households.

Implications and Learnings:

- Gendered impacts of the global price shocks were ignored completely within this study. Future studies must include gender-disaggregated data to fully understand how these price shocks to food and fertilizer impact men and women differently. Additionally, considerations must be made regarding the impacts of climate and conflict related shocks, as well as government policy responses and investment options to mitigate these impacts.
- Given the impacts of increasing fuel prices of food consumption in urban areas, CARE should increase interventions on programs with kitchen gardens and increase rural-urban market linkages to bring more sustainable and nutritious food supplies to urban communities.
- The decline in disposable incomes has had impacts on the dietary diversity and food consumption of rural farm, rural non-farm, and urban households. By implementing approaches such as the Farmer Field and Business School, CARE can increase food security and consumption of nutritious foods.

For more information, please see: [Russia-Ukraine War and the Global Crisis: Impacts on Poverty and Food Security in Developing Countries](#)

Upcoming Publications



Scoping Review on Gender-Disaggregated Data in Climate Smart Agriculture

Research Partners: This research was conducted by CARE and the International Rice Research Institute (IRRI) under the GGIAR Gender Platform.

Background: As more people, particularly women and girls, face more severe food insecurity as a result of climate change, there is an increasing need to invest in climate resilience agricultural growth. The Climate Smart Agriculture (CSA) framework was developed to address this need but despite the severe impacts of climate change on women and girls, gender equality was not incorporated into the original CSA approaches. Over the years, the state of gender in CSA has been continually progressing and evolving, emphasizing the importance of gender-disaggregated data and gender-specific indicators and metrics in the development of new approaches and frameworks, and in monitoring progress.

Research Aim: This research aims to understand how gender-disaggregated data are available within Climate Smart Agriculture (CSA) programming, and identify gaps in how this data is collected, analyzed, and used. Furthermore, this research will examine how these gaps in data contribute to gender inequalities preventing women and girls from benefitting from CSA programming.

Methodology: This scoping review used a desk review of available literature as well as a series of key informant interviews with a wide range of organizations and institutions.

Key Findings: The collection, analysis, and use of gender-disaggregated data within CSA programming varies greatly depending on organization/institution. Some broad trends in gender-disaggregated data in CSA programming are:

- Several organizations integrated gender into all aspects of the project cycle- design, implementation, and monitoring and evaluation. Most organizations focused on gender-disaggregated data in respect to reach of CSA programming, participation in CSA activities, and adoption of CSA practices. Several also examine the gendered impacts of adopting CSA practices and technologies and used these findings to adapt on-going programming and inform future programming and/or policies.
- Many organizations also collected, analyzed, and used age-disaggregated data in addition to gender-disaggregated data but very few made efforts to collect, analyze, and use data disaggregated by other intersectional variables, such as ethnic minority groups or people with disabilities.
- Gaps in gender-disaggregated data in CSA stem from a lack of high-level commitment and intention to seek gender equality and social inclusion outcomes in CSA, and a lack of clear and standardized indicators to measure impacts. Additionally, resources and project cycles often depend on donor priorities and do not allow the time to capture disaggregated impact data or the capacity to integrate gender within CSA programming.

Implications and Learnings:

- An alliance of organizations should be created to advocate for greater leadership from key international and regional institutions, including mandating the integration of gender equality and social inclusion within all pillars of CSA, and prioritizing funding opportunities that work in intersectional areas within CSA and allow for long-term disaggregated data collection and analysis for impact evaluation.
- Within program implementation, staff capacities must be increased to integrate Gender Equality Approaches within CSA projects. Within monitoring and evaluation, guidance must be created to better evaluate gender-disaggregated impacts of CSA programming and sufficient resources must be allocated to efficiently and effectively collect, analyze, and use gender-disaggregated data in CSA.

For more information, please stay tuned for the publication of the Scoping Review. If you have questions in the meantime, please contact Abinet Tasew (abinet.tasew@care.org)

Tools



IMPROVING NUTRITION DURING MIDDLE CHILDHOOD AND ADOLESCENCE BY 2032: A RESEARCH ROADMAP

Project and Research Partners: This research roadmap was put together in collaboration between the Emergency Nutrition Network, The Waterloo Foundation, Irish Aid, and the United Nations Children’s Fund (UNICEF).

Background: Although nutrition during middle childhood (ages 5-9) and adolescence (10-19) is known to be important and has large implications both individually and generationally, this area has been relatively neglected in research, policy, and programming agendas.

Objectives: This research agenda aims to create a 10-year detailed, global research agenda to support nutrition of children and adolescents in low- and middle-income countries.

Methodology: A research prioritization exercise was conducted using the Child Health and Nutrition Research Initiative (CHNRI) methodology. This research agenda provides a scoping review of the six priority research areas identified through the CHNRI exercise.

Research Areas: The following research areas and specific questions have been proposed to fill key evidence gaps within existing research on middle childhood and adolescent nutrition:

- How should antenatal care (ANC) and postnatal care (PNC) interventions be adapted to effectively, and cost effectively, support the specific health and nutritional needs of pregnant adolescents?
- What strategies are effective for delivering interventions in schools to improve the quality of diets and the nutritional outcomes of school-age children (SAC) and adolescents?
- What strategies are effective at involving SAC and adolescents in defining their own context-specific solutions to nutrition problems, and does their involvement result in more effective interventions?
- What are effective, context-specific behavior change communication strategies to improve the diets and nutritional status of SAC and adolescents?
- What improvements can be made to local food systems to support access to healthy diets in schools?
- What are the optimal cross-sector partnerships and delivery platforms (health, education, social protection, digital platforms, media/technology, etc.) for the effective uptake of nutrition interventions for SAC and adolescents, considering scale, sustainability, and youth engagement?

Cross-cutting Considerations: Research and interventions as highlighted above should seek to focus on being cost-effective to ensure appropriate funding is allocated, incorporate monitoring and evaluation components to assess impact, and focus on multi-sector engagement to broaden the scope and scale of interventions. These proposed questions and areas of research can be used to drive funding, government priorities, and research aims for the next 10 years.

For more information and to view the full tool including sub-questions and methodology suggestions, please see: [Improving Nutrition during Middle Childhood and Adolescence by 2032: A Research Roadmap](#)

Thank you for reading! Please send your current research projects and publications to Maureen.Miruka@care.org and Emma.Smith@care.org for future editions.