



Coping with Compounding Challenges in Conflict Crises: Evidence from North-east Nigeria

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Abstract

This paper analyzes how the intersectionality of gender, forced displacement, and collective violence shapes coping behaviors in conflict crises, paying particular attention to household composition by gender and age. Drawing on survey data from 17,951 individuals in North-east Nigeria, the analysis finds that coping behaviors at the household, adult, and child levels are interlinked and strongly shaped by compounding challenges stemming from individual gender, household forced displacement status, and local violence shocks. These challenges have significant welfare implications and create severe vulnerabilities and special needs for specific groups of households and individuals, such as rural communities affected by violence, large households with many children, female breadwinners, and displaced girls. The findings emphasize the need for and potential of concerted policy approaches that account for the intersectionality of gender, displacement, and violence in conflict settings and pay particular attention to specific types of communities, households, and individuals.

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1 Introduction

According to official statistics, 82.4 million people were forcibly displaced at the end of 2020, including 48 million internally displaced persons (UNHCR 2021). Recent reports suggest that the total number of forcibly displaced people worldwide has now risen to above 100 million.¹ In many displacement settings, people flee political violence. In fact, all six “Level 3” (that is, most severe) emergencies as classified by the World Food Programme are the direct result of violent conflict (WFP, 2020).² In addition, women and girls are often at particular risk in these situations, as they are faced with vulnerabilities, persecution and forms of violence that are based on their gender (World Bank, 2017).

However, how the three dimensions of forced displacement, gender and violence jointly shape people’s behaviors and outcomes in conflict crises is not well understood and data-driven empirical evidence is particularly scarce (Brück and Stojetz, 2021). Such evidence is particularly needed for humanitarian emergency settings, where individuals and households rely even more on interventions than in other, more peaceful settings. Specifically, it is necessary to inform an emerging class of new interventions that seek to bridge the gap between those operating at the so-called humanitarian–development–peacebuilding (HDP) triple nexus and those trying to foster durable solutions (DS) for forcibly displaced people (Nguya and Siddiqui, 2020).

In this paper, we study adverse coping behaviors among forcibly displaced and non-displaced people in North-east Nigeria, a humanitarian, development and conflict crisis setting (WFP, 2021). To do so, we take an intersectional perspective (Bastia, 2014; Agbonifo, 2020), which emphasizes the relationships and interactions between different explanatory factors and across the individual and group levels for understanding behaviors and outcomes (Kapilashrami and Hankivsky, 2018). Specifically, we analyze how gender, displacement status and local violence shocks (the ‘factors’) shape coping behaviors at the household, adult and child levels (across ‘levels’), and pay particular attention to household composition by gender and age.

For the empirical analysis, we combine unique household survey data and high-quality conflict event data from North-east Nigeria. We use the new “Nigeria IDP Survey 2018” dataset (Pape and Kwenin, 2018), which is based on a household survey sample that is representative of internally displaced persons (IDPs) in North-east Nigeria. In enumeration areas located in host communities, the survey also collected information from a sample of non-IDPs that is representative of the non-displaced population in host communities. The dataset contains observations from 17,951 individuals from 2,947 households: 8,524 IDPs (1,437 households), and 9,427 non-IDPs (1,510 households). The dataset provides detailed socio-economic information from all households and individuals, as well as displacement information for IDPs. We spatio-temporally match the survey data with conflict event data from the Armed Conflict Location & Event Data Project (ACLED). The ACLED data allows us to calculate an indicator of the local intensity of armed-group violence based on the number of documented violent events in the 12 months prior to the survey.

¹ See: <https://news.un.org/en/story/2022/05/1118772> (accessed May 30, 2022).

² These are the Democratic Republic of the Congo, North-east Nigeria, the Sahel, South Sudan, the Syrian Arab Republic and the Republic of Yemen.

Our paper shows that coping behaviors in conflict crises are strongly shaped by the intersectionality of gender, forced displacement and violence. We find that in conflict crises, gender, displacement status and local violence shocks can create compounding challenges across multiple levels of observation. These compounding challenges have significant welfare implications and create particular risks and vulnerabilities for specific groups of households and individuals.

We document that specific types of households are more likely than others to engage in adverse food-related coping behaviors (we will refer to as ‘harmful food coping’ as shorthand): IDP households; households that rely more on female breadwinners; households with many children; and households in violent rural areas. Women face strong gender-based barriers to being economically active and working IDP women face additional disadvantages due to their displacement status to securing productive work outside agriculture. Children in these household types not only bear the disadvantages in well-being at the household level, but these also put their education at risk, especially that of girls.

Our study is related to two broad academic literatures. First, we add to the cross-disciplinary literature on conflict-induced forced displacement, which has produced detailed insights into the causes, characteristics and consequences of forced displacement (Ruiz and Vargas-Silva, 2013, Bohnet et al. 2018; Hartman et al., 2021; Canavan and Turkoglu, 2022). It is now increasingly recognized that displaced women and girls often face numerous gender-specific challenges and vulnerabilities (El-Bushra, 2000; World Bank, 2017) and that displacement research can benefit strongly from analyses through a gender lens and feminist approaches (Brickell and Speer, 2020; Singh, 2021). In a similar vein, there is growing awareness that many behaviors and outcomes in settings of forced displacement will not have mono-causal or mono-level explanations. Rather, multiple (“intersecting”) factors across multiple levels of society need to be considered, and the way they are interconnected (Yacob-Haliso, 2016; Kapilashrami and Hankivsky, 2018; Agbonifo, 2020). However, empirical evidence from such intersectionality- and gender-based analyses of conflict settings remains scarce, especially micro-level, quantitative evidence. We contribute such evidence by studying quantitatively how forced displacement, gender and violence jointly shape crisis responses at three levels of observation (the household, adult and child levels).

Second, we contribute to a better understanding of conflict crises. Conflict crises present affected populations with various forms of adverse conditions. However, how different (groups of) people experience these conditions is likely to be highly heterogeneous but under-researched (Brück et al; 2016). Coping behaviors in particular are at the core of how individuals experience and survive acute conflict situations (Lautze, 2006). Yet, high-quality large-N quantitative information on conditions, exposure, and behaviors in these contexts is scarce, as collecting it is inherently difficult, due to access, safety and ethical concerns (Kolade et al., 2019; Sarzin, 2017). At the same time, micro-level data and evidence are key to understanding conflict outcomes and impacts (Canetti et al., 2017; Bohnet et al., 2018; Hartman et al., 2021; Canavan and Turkoglu, 2022), as well as informing policies to protect and support lives and livelihoods in conflict situations. Our study matches high quality survey and conflict event data to produce disaggregated insights into how households, adults and children react to the complex challenges conflict crises entail.

The remainder of the paper is organized as follows. Section 2 describes the context of our study. Section 3 presents our methodological approach. Section 4 introduces the data and provides

descriptive statistics. Section 5 presents our results. Section 6 discusses our findings. Section 7 concludes.

2 Context

The North-east of Nigeria, comprised of the six states of Adamawa, Bauchi, Borno, Gombe, Taraba and Yobe (**Figure 1**), has been afflicted by multiple crises including from the humanitarian and security perspectives.³ Conflict and violence in the Lake Chad region (and the Sahel more generally) have had a negative impact on opportunities for development and further depleted scarce resources for livelihoods. It is a mostly rural setting, characterized by alarming levels of poverty and food insecurity (Baliki, Brück and Stojetz, 2018). An estimated 80% of the region's total population of about 20 million rely on agriculture, fishery and livestock for their livelihoods, but the conditions for agriculture have worsened (World Bank, 2016). Among other issues, access to input factors for farming has deteriorated, including access to land and irrigation, and market prices have increased, including for transportation costs and input purchases.

Since August 2016, North-east Nigeria has been classified as a Level-3 emergency by the World Food Programme (WFP), with an estimated 9.2 million people being food insecure (WFP, 2021). For example, the situation forces many to take drastic measures such as reducing meals or portion sizes and having to buy most of their food from the market (World Bank, 2018). Violent conflict has disrupted social networks, social cohesion and value chains, and caused conflict-induced forced displacement, which puts already fragile displaced and host communities under additional stress. The broader country and region face systemic economic, social and political fragility, and volatile climate and weather conditions (World Bank, 2020; ACAPS, 2022), including recurring droughts (Okpara et al., 2016; Nagarajan et al., 2018). As a result, multiple, extreme forms of adversity have sharply increased the population's vulnerability and risks of food insecurity, especially in rural areas.

Conflict. Since 2009, North-east Nigeria has been characterized by extreme violence between armed groups and against civilians, primarily due to the emergence of the Boko Haram insurgency. Boko Haram, which literally translates as "Western education is forbidden" was founded in Borno in 2002 under the official name of "Jama'atu Ahles-Sunnah Lidda' Awati Wal Jihad", which literally translates as "People Committed to the Propagation of the Prophet's Teachings and Jihad" (BBC, 2016). In 2009, Boko Haram started their violent operations, attacking police and security forces in Borno (Campbell, 2014). Violent attacks intensified and spread to neighboring states, leading to the declaration of a caliphate under Boko Haram's control in 2014. Boko Haram then also began targeting political leaders, traditional authorities and civilians of both Christian and Muslim faiths (ACLED, 2013).

The declaration of the caliphate was counteracted by the Multinational Joint Task Force (MNJTF), a coalition formed by Nigeria, Cameroon, Chad, Niger and Benin, fighting Boko Haram in a violent conflict. By 2015, the MNJTF forced Boko Haram to withdraw and Nigerian President Muhammadu Buhari stated that Boko Haram had been 'technically' defeated. Fatalities associated

³ Our empirical analysis analyzes data collected between June and August 2018. Therefore, we primarily focus the discussion of the study context on the second half of 2018.

with Boko Haram fell dramatically after 2015.⁴ However up until late 2018, the period studied in this paper, the group still maintained the capacity to engage in violent attacks, remaining a highly dangerous threat to the lives of thousands of civilians and the stability of the region (ACLED, 2019).

The Armed Conflict Location and Event Data Project (ACLED) lists 4,440 violent events for the period between January 2009 and July 2019. **Figure A1a** shows the temporal distribution of events between 2009 and 2018 (the year of the survey). The spatial spread of these events in **Figure A2a** illustrates that ‘high-intensity’ conflict – as proxied by the total number of violent events – took place in urban or peri-urban areas of Borno state in and near Maiduguri. In relative terms, rural areas were characterized by less intense conflict.

Many of Boko Haram’s operations target civilians and women and girls in particular. Compared to other terrorist organizations, such as Al-Shabaab, their attacks are even more lethal and include more abductions (Matfess, 2020). Extreme violence against women and girls increased in 2014 during a period of relative strength and includes many forms of violence, such as lethal attacks and forced abduction (Holpuch, 2018). The reasons for targeting civilians and women in particular are multifaceted and appear to vary, including both instrumental and ideological motives (Matfess, 2020).

Displacement. By the end of 2020, the conflict had displaced about 2.1 million individuals in North-east Nigeria (UNHCR, 2021). An estimated 56% of the internally displaced population are children (IOM, 2020). The number of IDPs increased rapidly in 2014 and has remained at more or less the same level to the present day. **Figure A1b** displays reported dates of (first) displacement in our survey data, which is representative for the displaced population in North-east Nigeria in 2018.

Most IDPs in North-east Nigeria are displaced within their state of origin, 74% of IDPs are located in Borno state and 83% of all IDPs are from that state. An estimated 57% of IDPs reside in one of the 2,085 documented host communities, while the remaining 43% live in one of the documented 307 camps or camp-like settings. Of the IDPs in host communities, 90% live in private buildings.

Gender inequality and gender-based violence. Gender inequality and gender-based violence are highly prevalent in the region, as the conflict and other factors create and perpetuate gender-based disparities, discrimination, barriers to empowerment, and risks of intimate partner violence (e.g., Ekhatior-Mobayode et al., 2020). Specifically, the strong social and gender norms have been shown to shape nutrition and welfare outcomes across and within families (UN OCHA, 2018, Nwoke et al., 2022) as well as conflict outcomes, such as recruitment into Boko Haram (Rexer, 2018).

Social norms in the region continue to create strong, gender-specific challenges and disadvantages for women in many dimensions (Agbonifo, 2020; CARE, 2022). Women are often primarily expected to fulfill their responsibilities as caregivers and subsistence farmers and face

⁴ There were more than 11,500 reported fatalities by the group in 2015, the deadliest year. By 2018 that number had fallen to approximately 2,700 reported fatalities (ACLED, 2019).

gender-based barriers to access to credit, land properties, employment, education, and medical care, among other things (Allanana, 2013; Onwuka et al., 2015). In addition, it has been shown that several factors, including climate stress and food crises, increase rates of marriages at an early age (Agwu and Okhimamhe, 2009). Women are also often excluded from decision-making processes inside and outside their homes, including farming decisions and participation in local community organizations and politics (Ogunlela and Mukhtar, 2009; Nagarajan, 2017; UN Women 2020).

The Women, Peace, and Security Index by the Georgetown Institute for Women, Peace and Security ranks countries according to 11 indicators in three different categories, namely inclusion, justice and security. Nigeria as a whole is ranked as number 145 of 167 countries (GIWPS, 2019). A pilot study to produce the index at the sub-national level shows that the extent of these issues also varies significantly within Nigeria, with the three states Adamawa, Borno and Yobe scoring worst.

Demographic and Health Survey data suggest that 30% of women aged 15-49 in North-east Nigeria have experienced physical violence and 35% state that a husband is justified in beating his wife (NPC and ICF, 2014). In addition, a recent World Bank study on Gender Based Violence (GBV) in Nigeria (World Bank, 2019) emphasizes that gender norms in North-east Nigeria are a key risk factor for Intimate Partner Violence (IPV). Such norms include, for example, the presumed social superiority of men, the belief that paying a bride price is equivalent to purchasing a wife, and men's rights to 'correct' their wives' behavior. In addition, only 23% of female survivors of GBV in North-east Nigeria seek help.

3 Methodology

3.1 Intersectionality approach

To grasp the complex role of gender, forced displacement and violence for coping behaviors in conflict crises, we take an 'intersectional' perspective (Bastia, 2014). Such an approach aims to explore different forms and sources of disadvantage and emphasizes their interconnectedness and interdependencies, rather than approaching them as separate domains (Crenshaw, 1990; Valentine, 2007). Specifically, intersectionality seeks to understand outcomes by exploring the relationships and interactions between different factors and across the individual and group levels (Kapilashrami and Hankivsky, 2018).

Intersectional approaches are increasingly applied in development research and have been shown to improve analyses of labor market outcomes in Sub-Saharan Africa (Elu and Loubert, 2013; Grünenfelder and Schurr, 2015). From a gender perspective, it can help to uncover the interlinkages between the multiple sources of gender inequalities and "focus on the experiences of those who have been excluded thus far from feminist analysis" (Bastia, 2014).

We thus aim to analyze how different forms of disadvantage stemming from gender, forced displacement and violence outcomes (the 'factors') in conflict settings shape coping behaviors at the household, adult, and child levels (across 'levels').

3.2 Key indicators

We study three main outcomes: harmful food coping at the household level, economic activity at the adult level (age 15 or over), and school attendance at the child level (ages 6-14).

To study *harmful food coping* at the household level, we measure the extent of adverse food-related coping behaviors via the Reduced Coping Strategies Index (rCSI) (Maxwell and Caldwell, 2008). The rCSI is based on five different coping behaviors at the household level, and reflects both the frequency of each behavior (on how many of the last 7 days it occurred) and its severity (how strongly it threatens a household's well-being). The specific survey questions are:

Over the last 7 days, how many days did your household ...

- a) ... *rely on less preferred and less expensive food? (severity weight (sw) = 1)*
- b) ... *borrow food or money for food from friends or relatives? (sw = 2)*
- c) ... *limit portion size at mealtimes for all household members? (sw = 1)*
- d) ... *restrict consumption by adults in order for small children to eat? (sw = 3)*
- e) ... *reduce the number of meals eaten in a day for all household members? (sw = 1)*

For each item, the number of days is multiplied with severity weight. In turn, the rCSI score is the sum of these five values. Therefore, the maximum raw score for the rCSI is 56, and households with scores above 10 can be considered "severely food insecure" (Vaitla, Coates and Maxwell, 2015). In the main analysis, we use a standardized rCSI, with zero mean and unit standard deviation.

Our main indicator of economic activity among adults equals one if an individual (age > 14) is engaged in at least one of the following five forms of work in the past 7 days: 1) paid labor for someone else; 2) unpaid labor in an off-farm family business; 3) non-agricultural self-employment; 4) agricultural self-employment; and 5) participation in unpaid training or workshops to foster skills. Each item was asked separately and independently to all individuals (age > 14), and we also analyze the binary indicators of each category separately.

The *school attendance* indicator equals one if an individual is currently attending school (or college). Note that school attendance is nominally compulsory up to the age of 14 in Nigeria. We thus chose age 14 as the cut-off point for school attendance and employment alike.

Gender and household composition indicators. The female indicator at the individual level equals one if an individual is female. Our primary indicator at the household level equals one when the household head is female, which has traditionally been a key indicator in academic studies and in policy and practice. To go beyond the headship level, we use the very detailed, sex-disaggregated survey data to construct other key measures of gender and composition at the household level, and thus provide a more nuanced assessment of the role of gender (Hanmer et al. 2021; Klugman, 2022). Based on age, we study a dependency difference indicator, which is the difference between the number of adults and the number of children in the household. Based on gender, we study a gender difference indicator, which is the difference between the number of female and male members in the household. Based on gender and age, we study age-specific indicators of gender differences, for example the difference between the number of boys and girls in the household. Based on gender, age and employment information, we study a gender difference indicator in

economic activity, which is the difference between the number of economically active women and men in the household.

Forced displacement indicators. Our indicator of displacement status at the household level equals one if a household is an IDP household. Similarly, the displacement status indicator at the individual level equals one for individuals in IDP households. Indicators of displacement *experiences* include a range of displacement characteristics, such as displacement date, number of times the household has been displaced, reason for displacement, and livelihood and education before displacement.

Violence indicators. Our indicator of exposure to violence equals one if an individual or household resides in an area where violent events occurred in the 12 months prior to the study. We prefer a binary indicator because there is a significant number of enumeration areas, in which no violent events occurred, it helps to deal with outliers with a high number of events, and it reduces issues of measurement error. For rural areas, we use an indicator of local violence at the LGA level, while for urban areas we use an indicator at the more fine-grained ward level. The reason is that the underlying contours of violence differ across rural and urban areas. The rural areas are very large compared to the urban areas and were characterized by relatively low levels of conflict intensity (compared to urban areas). Urban and peri-urban areas are much denser and were predominantly characterized by high-intensity violence that was highly concentrated spatially. We thus opted to choose the ward level in urban areas and the LGA level in rural areas as the appropriate administrative units of analysis.

3.3 Econometric specifications

For our baseline estimates of additive and interactive impacts of gender and displacement status (discussed in Section 5), we use linear fixed-effect models that estimate the coefficients of interest, β and δ , by OLS regression:

$$Y_i = \alpha D_i + \beta E_i + \delta D_i \times E_i + \gamma' X_i + \varepsilon_i \quad (1)$$

Here, Y is a coping behavior variable, D is the female indicator; E is the displacement status indicator, X is a flexible vector of control variables (including local fixed effects); and ε is the error term. In our main specifications, we cluster our standard errors at the ward level (53 clusters).

In conditional analyses, we focus on parsimonious specifications to avoid issues arising from the inclusion of “bad controls” (Angrist and Pischke, 2009, 2014). That is, our baseline models do not include variables that may themselves be outcomes of the gender or displacement variables, which would complicate the interpretation of estimated coefficients of interest due to endogeneity and spurious correlations. Similarly, we specify and test an additional set of models that estimate the main and interactive impacts of local violence shocks, where we distinguish rural and urban areas. As the number of clusters is below 50 for both the rural and urban analyses, we use HC2 standard errors for these regressions.

4 Data and descriptive statistics

Household survey data. We analyze household survey data collected by the World Bank and collaborating partners between June and August 2018 (Pape and Kwenin, 2018). The sample is representative of the IDP population in North-east Nigeria and includes internally displaced persons and comparable host communities in the six north-eastern states of Nigeria. The survey provides information on employment and livelihoods, education, displacement characteristics, coping with food insecurity and consumption. The maps presented in **Figures A2b** and **A2c** show the spatial spread of surveyed host communities and camps.

Of the surveyed households, 46% are located in the urban area of Maiduguri (the capital of Borno state). Another 31% are located in the adjacent, rural Jere district, while the remaining 23% are spread across the six states in North-east Nigeria. Of the IDP households that reside in host communities, 51% are located in Maiduguri and 30% in Jere. Among IDPs in camps, 35% of the households are located in Maiduguri and 39% in Jere.

The total survey sample includes 17,951 individuals from 2,947 households:

- 563 IDP households (3,290 individuals) that are located in IDP camps;
- 874 IDP households (5,234 individuals) that are located in host communities;
- 1,510 non-IDP households (9,427 individuals) that are located in host communities;

Thus, 47% of the surveyed individuals are IDPs, and 18% (of the full sample) are camp-based IDPs. The survey includes both household information and a household roster module containing information on socio-demographic indicators, health, education (for members ages 6 or older) and employment (for members ages 15 or older).

Conflict event data. We match the survey data spatio-temporally with conflict event data from the Armed Conflict Location & Event Data Project (ACLED), using detailed geo- and time-tagged information on events of violence (Raleigh et al., 2010). Events reported by ACLED include various forms of violence, and allow us to calculate a local violence measure for IDP and non-IDP households, which counts the total number of violent events in the 12 months prior to the survey.

Study sample. The surveyed population is fairly young, with a mean age of 18.9 years. The detailed breakdown in **Figure A3a** shows that in terms of age and gender, IDPs and non-IDPs are relatively similar. In each group, about one-half of the surveyed individuals are females. About 50% of the sample is also younger than age 15; 16% are between 15 and 24 years old, 29% are between 25 and 64 years old, and 2% aged 65 or over. As shown in **Figure A3b**, the majority of household heads are between 25 and 64 (about 85%) and about two-thirds are male for both IDPs and non-IDPs.

Table 1 presents summary statistics for the key variables used in the main analysis. The mean rCSI at the household level is 11.02, 61% of adults (age 15 or over) are engaged in any form of economic activity, while 74% of children aged 6 to 14 attend school.

rCSI (household). **Figure A4a** lists the five items the rCSI is built from and reveals that the mean household employed each of the very harmful food-related behaviors on at least one of the 7 days prior to the survey. The most frequently used harmful behavior was to rely on less preferred or

expensive food (mean = 2.2 days). The prevalence of these behaviors is very concerning and underlines the vulnerability and precarity of households in North-east Nigeria. This is emphasized further when we look at poverty and consumption outcomes (**Table A1**). For example, 84% of surveyed households fall below the poverty line of USD 1.90 per person per day, 49% had no bread to eat in the 7 days prior to the survey and 70% had no meat or dairy products to eat.

Economic activity (age > 14). **Figure A4b** shows detailed information on economic activities individuals engaged in the 7 days prior to the study. The most frequent activity was non-agricultural self-employment, which 41% engaged in, followed by help in family non-farm businesses (30%), salaried labor (26%), and agricultural self-employment (24%). On average, workers engage in about two separate economic activities and for 24% the main sector is agriculture (**Table 1**).

School attendance (age > 14). **Figure A4c** shows the distribution of school attendance by age, from 6 to 14 completed years of age, the range for which schooling is compulsory. School attendance rates are above 75% for ages 11 and over, and tend to decrease slightly for younger ages. Stated reasons for non-attendance vary widely, but 14% say that the child “is still too young” to attend school, the second most frequent answer (**Table 1**). By far the most common reported reason is a “lack of financial resources” (66%).

Displacement and local violence. The average IDP household has been displaced for 3.7 years, has moved 1.3 times and the vast majority (92%) report that Boko Haram activity was their main reason for displacement (**Table 1**). The number of events of local violence individuals were exposed to over the 12 months prior to the survey ranges from 0 up to 44, with high numbers concentrated in small areas in Maiduguri. Of the sample, 39% were exposed to any local violence captured in the ACLED dataset, and the average individual was exposed about 7 documented events.

Household gender and composition. **Table 2** reports information on gender and composition at the household level, broken down by IDP status. Of the surveyed households, 34% are headed by a female and there is no significant difference between IDP and non-IDPs. In terms of composition, non-IDP households are slightly larger. While the mean difference with non-IDPs is statistically significant, it is modest in magnitude (6.24 members in non-IDP households versus 5.93 members in IDP households). The slight difference between IDPs and non-IDPs is driven by a slightly higher average number of adults in the household, for both men (1.51 versus 1.29) and women (1.54 versus 1.36). By contrast, IDP and non-IDP households do not differ significantly in the number of boys, girls, and children in total (around 3 on average). Notably, IDP and non-IDPs also do not differ systematically in terms of gender composition. This includes the number of women versus men in the household, the number of girls versus boys, and the number of economically active women versus economically active men.

5 Results

5.1 Harmful food coping among households

Table 3 presents baseline estimates on the role of gender and displacement for engaging in harmful food-related behaviors (harmful food coping). We find strong evidence that IDP households

employ significantly more harmful food coping than non-IDP households. Being an IDP household is robustly associated with a decrease around .25 standard deviation in the rCSI. In absolute terms, this corresponds to a 2.97-point increase, which is sizable and concerning given that the mean absolute score is 11 and scores above 10 are considered “severely food insecure” (Vaitla, Coates and Maxwell, 2015). As one of the items to build the rCSI refers to small children in the household, we report results from a sample that excludes households without small children as a robustness check (column 8). Restricting the sample to households with children below the age of 15 leaves the results unchanged.

Studying associated variation in consumption, we find that IDP status is associated with a significant decrease in the consumption of animal products (meat and dairy products) as well as fruits and vegetables (**Figure A5**). We also find that IDP households are significantly more likely to be living in poverty, both using the 1.90USD and the 1.25USD poverty lines (**Figure A5**). These results emphasize the vulnerability associated with harmful food coping.

By contrast, the gender of the household head is not related with the extent of harmful food coping in any meaningful way and does not alter the influence of IDP status (**Table 3**). This also holds for the specific sub-group of widow-headed households (column 4).

To gain deeper insights into the role of gender and household composition, **Figure 2** plots the bivariate relationships between the size of various groups of household members with rCSI outcomes. We observe a strong link of harmful food coping with total household size, where more members are associated with higher rCSI. Distinguishing by age and gender reveals that this relationship is driven by the total number of *children* in the household. An increase in the number of either girls or boys is strongly associated with more harmful food coping, but variation in the number of *adults* does not have similarly clear implications. This also holds for both the number of women and men when we look at these separately. There appears to be a slight increase in harmful food coping when households have a very large number of adults, but the increase is very imprecise due to the very low number of households with such large numbers of adults.

These observations are confirmed in linear multiple regression models (**Table 3**). Adding either household size (column 6) or the number of adults and children separately (column 7) to the model leaves the IDP coefficient unaffected. However, we observe a statistically significant and positive link between the total number of household members, and that of children in particular, with the extent of harmful food coping.

In **Figure 3**, we also test the relevance of differences in household composition based on age and gender. We find, first, that the larger the number of children compared to the number of adults per household, the higher the risk of harmful food coping (**Figure 3**, model A). This insight corroborates the finding that the number of children plays a critical role in harmful food coping and that households with many children are particularly vulnerable. By contrast, for a given number of children in the household, differences in composition (that is, the number of girls versus the number of boys) do not appear to affect harmful food coping (**Figure 3**, model B).

For adults, the difference between the number of women versus men is not associated with the extent of harmful food coping either (**Figure 3**, model C). However, we observe that harmful food

coping is related to gender differences in the number of economically active adults (**Figure 3**, model D). Specifically, the larger the number of economically active women compared to economically active men, the higher the risk of harmful food coping in the household. This result suggests that there is a second group of households that are particularly vulnerable, namely households that rely more heavily on female breadwinners.

To better understand the contours and sources of vulnerability of these groups of households, we study children and economically active adults in more detail in the following sections.

5.2 Economic activity among adults

For adults, we find that their status of economic activity is strongly determined by their individual gender, and not by their displacement status (**Table 4**). Sequentially partialling out the influence of individual age, the gender of the household head, local fixed effects, household size, the total number of adults, and the total number of children, we find that women are consistently 19 to 20 percentage points less likely than men to be engaged in at least one (surveyed) economic activity.⁵ Even when we control for an individual's years of education, which is likely endogenous, the coefficient only changes slightly (to about .16) and remains highly statistically significant. Neither economic activity status nor the gender gap is meaningfully altered by differences in displacement status. Notably, this pattern of a strong and negative role of gender and a negligible role of IDP status holds for every category of surveyed economic activities separately (**Table A2**). We see the strongest gender gap in economic activity for paid labor, in which women are 25 percentage points less likely to be engaged than men.

To better understand the particular vulnerabilities of IDP households that primarily rely on female breadwinners, we focus on economically active women in **Table 5**. Testing for systematic differences due to displacement status, we find that economically active IDP women do not differ systematically from their non-IDP counterparts in terms of the number of activities, hours worked per week or months worked per year (columns 1-3). However, economically active IDP women are significantly more likely to primarily work in the agriculture sector (column 4), and their self-reported welfare is significantly lower than that of non-IDP women. Specifically, working IDP women are substantially more likely to be poor than working non-IDP women (column 5), and their subjective well-being is significantly lower in comparison (column 6).

These results suggest that economically active IDP women carry an additional burden based on their IDP status. IDP women do not work less than economically active non-IDP women, but their work is more confined to work in agriculture and tends to be less beneficial in terms of poverty status and personal well-being.

In terms of economic activity, IDP women thus not only face a disadvantage based on their gender at the extensive margin, but also a disadvantage based on their displacement status at the *intensive* margin. It is worth noting that IDP households are *not* more likely to rely primarily on female breadwinners than non-IDP households (see **Table 2**). But when they do, these disadvantages

⁵ As noted above, the five measured categories are 1) paid labor for someone else; 2) unpaid labor in an off-farm family business; 3) non-agricultural self-employment; 4) agricultural self-employment; and 5) participation in unpaid training or workshops to foster skills.

compound to contribute to the increased extent of harmful food coping among IDP households that rely more on female breadwinners. These results emphasize the intersectionality here by showing the interdependence between the gender and displacement factors and between the individual and the household levels.

5.3 School attendance among children

Children's school attendance rates vary by both individual gender and their displacement status. First, we document a sizable and robust difference in school attendance due to displacement status. Depending on the exact model, an IDP child is 6 to 8 percentage points less likely to be in school than a similar non-IDP child of the same age in the same location (**Table 6**). The influence of gender is weaker in comparison, but we do find a marginally significant interaction between a children's displacement status and their gender. Specifically, being a girl slightly exacerbates the disadvantages of being an IDP child in terms of school attendance (columns 4-6). These results are all conditional on age, which is a robust predictor of school attendance status (see also **Figure A4**). Notably, school attendance increases as age increases for both IDPs and non-IDPs as well as for both boys and girls.

The most common reason reported for school absence is a "lack of financial resources" (see **Table 1**). In **Table 7**, we test if some of the household-level factors associated with vulnerability discovered in section 5.1 predict school absence due to financial issues. We estimate that for IDP children who are not attending school it is 12%-13% more likely that the reported reason is a lack of financial resources than for non-IDP children not attending school. By contrast, we do not find evidence that the child's gender plays an important role. We document, however, that the more children there are in the household compared to adults the more likely it is that the reason is of a financial nature (column 3). Similarly, the likelihood of absence due to financial issues is higher among households that rely more on female breadwinners (column 4).

Taken together, these results provide further evidence that IDP households, households with many children and those that rely more on female breadwinners are particularly vulnerable, and add that these disadvantages also put children's education at risk, especially that of girls. These results highlight further the interdependence between the gender and displacement domains and between the individual and the household levels.

5.4 The role of local violence

In **Figure 4**, we present results on the role of local violence shocks, distinguishing violence in rural and in urban areas. We find that violence in rural areas is strongly linked with harmful food coping. Experiencing violence shocks increases the extent of harmful food coping by .40 to .48 standard deviations, which is the same order of magnitude as the association with being an IDP household in this model (.33 to .47 standard deviations, see **Table A3**). The association does not vary significantly with IDP status, which suggests that local violence shocks are extremely harmful to both IDP and non-IDP households. In urban areas, the estimated association of harmful food coping with local violence is small, only about one-third of that with IDP status and not statistically significant at the 95% confidence level.

In terms of individual level outcomes, we do not find a strong link between local violence and being economically active in both rural and urban areas (**Figure 4**). The estimated magnitude is small compared to the size of the association with being a woman (.05 versus .18 in urban areas and about .07 versus .21 in rural areas), it is not statistically significant at the 95% percent level and it does not vary with gender (**Table A4**). Similarly, we do not find evidence for strong and systematic differences in school attendance based on violence shocks and these shocks do not seem to affect the magnitude of the significant interaction between being an IDP and being a girl (**Figure 4 and Table A5**).

In combination, these results suggest that people in North-east Nigeria primarily cope with the manifold impacts of violence shocks more at the household rather than the individual levels. Despite the extremely brutal nature of the violence, it appears that in affected localities many children still manage to attend school and adults manage to be economically active at similar rates, compared to children and adults in localities where no violence took place, respectively. However, the coping behaviors at the household level put households at extreme risk, adding to existing vulnerability. This is particularly the case in rural areas where the extent of harmful food coping is drastically increased when violence shocks occur, thus compounding risk factors at the household level stemming from gender composition.

6 Discussion

6.1 Poverty

Our primary focus is to study how gender (norms) and displacement shape coping outcomes of households and individuals. At the same time, the linkages with poverty are highly policy-relevant and critically important for understanding implications for vulnerability and well-being.

We view poverty as a symptom of the compounding challenges that gender norms and displacement create for households and individuals. Specifically, our result suggests that both being displaced and relying primarily on female breadwinners are strong sources of vulnerability and poverty risk.

We show that economic activity status is a function of gender but not of displacement status. Among working women, however, we find that IDP women carry an additional burden based on their IDP status. IDP women do not work less than economically active non-IDP women, but their work is more confined to work in agriculture and tends to be less beneficial in terms of welfare. It is worth noting that IDP households are not more likely to rely primarily on female breadwinners than non-IDP households. But when they do, these disadvantages contribute to the increased vulnerability and poverty risk of IDPs.

Regarding implications of poverty, we also show that being displaced and relying primarily on female breadwinners makes children more likely to miss school for financial reasons. It is again worth noting that IDP households do not differ systematically from non-IDPs households in terms of the number or gender composition of children. This shows that a girl's education is compromised by an interplay of disadvantages due to displacement status and gender norms, as well as their welfare implications for households.

6.2 Education

A perhaps surprising result is that even in the presence of local violence shocks, many children still manage to go to school. A few previous studies have documented similar no-effect relationships between local conflict intensity and education outcomes, such as the study by Pivovarova and Swee (2015) using panel data from Nepal. Yet, our finding contrasts with the majority of earlier studies that documented negative impacts of violence exposure on educational outcomes, including in North-east Nigeria (Bertoni et al., 2018). These differences might have to do with the fact that we study short-term processes and outcomes. That is, for education we analyze recent violence shocks and current school attendance, which differs from many previous studies. Our finding that the impacts on education outcomes are gender-specific are in line with robust findings in other conflict-affected settings (e.g. Shemyakina, 2011).

6.3 Policy implications

More broadly, our findings add important nuances to the understanding of the challenges that situations of forced displacement and armed conflict entail. It has become increasingly clear that many behaviors and outcomes in such settings will not have mono-causal or mono-level explanations. We use an intersectionality lens to contribute detailed insights into the interplay of forced displacement, gender and violence in jointly shaping crisis responses at the household, adult and child levels. Our outcomes of interest – adverse coping behaviors in food security, school attendance and economic activity – are key targets of support interventions in crisis and displacement settings.

Therefore, our findings on the compounding challenges stemming from forced displacement, gender and violence challenge some of the ways in which many policies and programs are designed. For example, policies and interventions to support women in conflict settings have often sought to address gender inequalities or the needs of the displaced in isolation. Yet, our findings emphasize the need for and potential of concerted policy approaches that account for the intersectionality of gender and displacement in these settings. The findings confirm that effective support for women should target IDPs, but that it should also try to alleviate the additional challenges and burdens IDP women face due to their gender.

7 Conclusion

Our paper shows that in conflict crises, gender, forced displacement and violence can create compounding challenges across multiple levels of observation. Such an interplay of factors across levels and contexts emphasizes the importance of *intersectionality* for understanding behaviors and outcomes in crisis settings. Our empirical evidence from North-east Nigeria suggests that coping behaviors at the household, adult and child levels are interlinked and strongly shaped by compounding challenges that stem from gender, forced displacement status and local violence shocks.

These compounding challenges have significant welfare implications and create particular risks and vulnerabilities for specific groups of households and individuals. We find that IDP households,

rural households, households with many children, and those that rely more on female breadwinners are particularly vulnerable, and that these disadvantages also put children's well-being and education at risk, especially for girls. Combined with the notoriously fragile natural environment and volatile climate and weather conditions in North-east Nigeria (ACAPS, 2022), these vulnerabilities and risks are extremely concerning, especially in rural areas.

Traditionally, policies and interventions in conflict settings have often sought to address gender inequalities and the needs of the displaced as singular, distinct issues. Such an approach has shaped both the targeting and nature of interventions. Examples include interventions focused on female-headed households or those providing transfers to the displaced. Insufficient attention has been paid to people suffering from compounding challenges in crisis settings.

The findings of our study highlight the need for and potential of concerted conflict policy approaches that 1) operate at the intersection of gender and displacement; 2) consider the special needs arising from exposure to local violence; and 3) pay particular attention to specific household types, such as large IDP households that depend on female breadwinners or households in violent rural areas, and particular groups, such as girls in these households. While specific challenges and their interplays may differ across contexts, we posit that other contexts will also exhibit compounding challenges across multiple levels of observation.

While descriptive, our analyses document clear findings that are relevant to identify the groups or situations of higher vulnerability and where aid should be targeted. Our findings highlight that new approaches to development policy and intervention in crisis settings are urgently required. Specifically, a new class of approaches must aim to cut across portfolios and sectors to tackle compounding challenges stemming from the intersectionality of gender, forced displacement status and local violence shocks.

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Table 1: Descriptive statistics

	Mean	SD	Min	Max	N
Main outcome variables					
rCSI	11.02	10.60	0	56	2947
Any economic activity	0.61	0.49	0	1	8418
Attends school	0.74	0.44	0	1	5445
Economic activity among workers (age > 14)					
Number of activities	2.05	1.10	1	5	5029
Hours worked per week	34.83	19.96	0	84	4547
Months worked per year	9.15	3.25	1	12	4971
Sector of main activity is agriculture	0.24	0.43	0	1	5055
School attendance (age 6-14)					
Ability to read	0.55	0.50	0	1	5438
Ability to write	0.54	0.50	0	1	5435
Years of education	4.07	2.23	0	13	3908
Attends school	0.74	0.44	0	1	5445
<i>Reason for not attending school</i>					
Lack of financial resources	0.66	0.47	0	1	1417
Too young	0.14	0.35	0	1	1417
Demographics, displacement and local violence					
Age	18.92	16.73	0	85	17951
Female	0.49	0.50	0	1	17945
IDP	0.47	0.50	0	1	17951
Camp IDP	0.18	0.39	0	1	17951
Years displaced	3.69	1.70	0	20	8517
Number of time household moved	1.34	0.65	1	8	8424
Boko Haram as main reason for displacement	0.92	0.27	0	1	8517
Events of local violence (last 12 months)	6.87	14.37	0	44	17951
Exposed to any local violence (last 12 months)	0.39	0.49	0	1	17951

Table 2: Household demographics and gender by displacement status

	IDP	Non-IDP	Δ	$p(\Delta)$
Household head				
Head female	0.35	0.33	0.02	0.26
Head widow	0.10	0.07	0.02**	0.02
Household composition				
Household size	5.93	6.24	-0.31***	<0.01
No. of adults	2.65	3.06	-0.41***	<0.01
No. of women	1.36	1.54	-0.19***	<0.01
No. of men	1.29	1.51	-0.22***	<0.01
No. of economically active adults	1.61	1.84	-0.23***	<0.01
No. of economically active women	0.68	0.77	-0.09***	<0.01
No. of economically active men	0.93	1.07	-0.14***	<0.01
No. of children	3.28	3.19	0.10	0.21
No. of girls	1.57	1.55	0.02	0.68
No. of boys	1.71	1.63	0.08	0.14
More females than males	0.39	0.40	-0.01	0.45
More women than men	0.28	0.26	0.02	0.16
More girls than boys	0.32	0.34	-0.02	0.28
No. of females - No. of males	-0.07	-0.05	-0.02	0.79
No. of working females - No. of working males	-0.25	-0.30	0.05	0.18
No. of women - No. of men	0.06	0.03	0.03	0.45
No. of girls - No. of boys	-0.14	-0.08	-0.06	0.41

Note: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

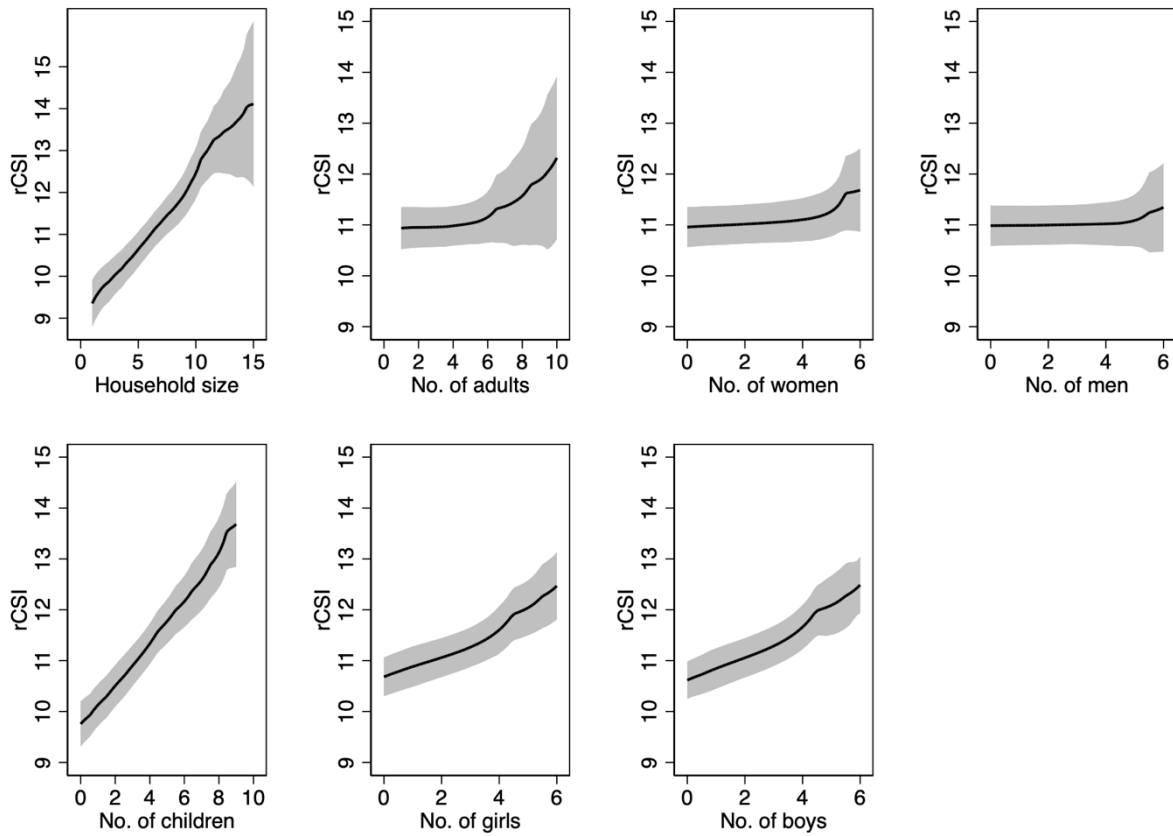
Table 3: rCSI (household)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
IDP	0.259*** (0.000)		0.260*** (0.000)	0.257*** (0.000)	0.248*** (0.002)	0.258*** (0.001)	0.247*** (0.002)	0.243*** (0.003)
Head female		-0.008 (0.877)	-0.018 (0.734)		-0.036 (0.558)	0.000 (0.995)	-0.003 (0.955)	-0.013 (0.863)
Head widow				0.065 (0.318)				
IDP x Head female					0.036 (0.565)	0.049 (0.447)	0.049 (0.445)	0.041 (0.575)
Household size						0.052*** (0.000)		
No. of adults							0.030* (0.052)	0.028* (0.058)
No. of children							0.067*** (0.000)	0.060*** (0.000)
Sample	Full	Full	Full	Full	Full	Full	Full	Restricted
Ward FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	2947	2947	2947	2947	2947	2947	2946	2616
R ²	0.078	0.064	0.078	0.078	0.078	0.096	0.098	0.091

Note: * p < 0.1, ** p < 0.05, *** p < 0.01. p-values in parentheses, standard errors clustered at the ward level (N = 53). The restricted sample excludes households without children below the age of

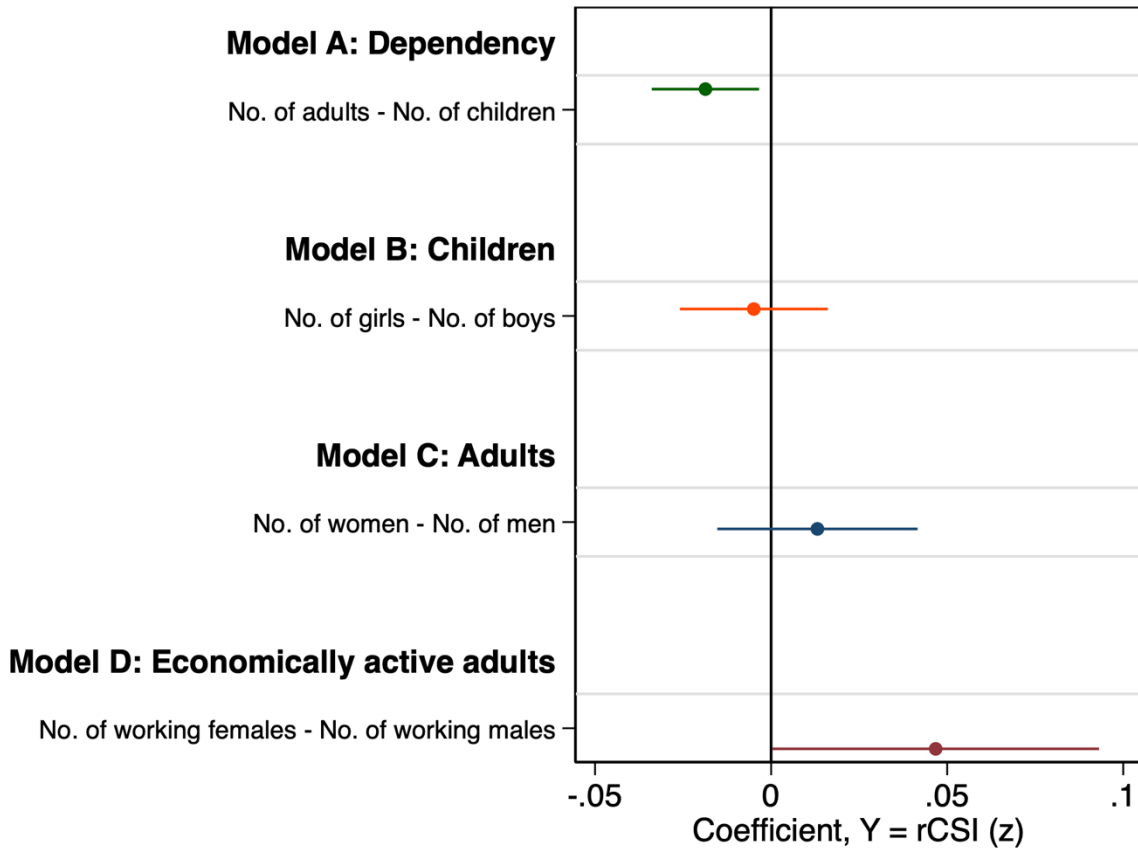
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Figure 2: rCSI and household composition (bivariate)



Note: The figures show local polynomial smooths and 95% confidence bands.

Figure 3: rCSI and household composition



Note: The figure displays coefficients and 95% confidence intervals from four separate linear regression models. In each model, we control for IDP status, gender of the head, household size, and ward-level fixed effects. In Models B-D we also control for the total number of individuals studied in the respective difference: children (Model B), adults (Model C), and economically active adults (Model D). We cluster standard errors at the ward level. The coefficients in Models A and D are both statistically significant at the 95% level.

Table 4: Economic activity (age >14)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
IDP	0.017 (0.336)		0.018 (0.289)	0.023 (0.236)	0.021 (0.268)	0.007 (0.735)	0.014 (0.532)
Female		-0.193*** (0.000)	-0.194*** (0.000)	-0.190*** (0.000)	-0.190*** (0.000)	-0.195*** (0.000)	-0.155*** (0.000)
IDP x Female				-0.009 (0.713)	-0.009 (0.713)	-0.012 (0.625)	-0.013 (0.674)
Age	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Education	No	No	No	No	No	No	Yes
Head gender	Yes	Yes	Yes	Yes	Yes	Yes	Yes
HH size	No	No	No	No	Yes	No	No
No. of adults	No	No	No	No	No	Yes	Yes
No. of children	No	No	No	No	No	Yes	Yes
Ward FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	8418	8417	8417	8417	8417	8416	5598
R ²	0.110	0.147	0.148	0.148	0.148	0.159	0.205

Note: * p < 0.1, ** p < 0.05, *** p < 0.01. p-values in parentheses, standard errors clustered at the ward level (N = 53).

Table 5: Employment and well-being outcomes among working women

	(1)	(2)	(3)	(4)	(5)	(6)
	No. of activities	Hours worked	Months worked	Main sector: agriculture	Poor: 1.90USD	Life satisfaction
IDP	-0.044 (0.610)	1.005 (0.372)	-0.385 (0.149)	0.040** (0.042)	0.068*** (0.000)	-0.644*** (0.000)
Age	Yes	Yes	Yes	Yes	Yes	Yes
HH size	Yes	Yes	Yes	Yes	Yes	Yes
Ward FE	Yes	Yes	Yes	Yes	Yes	Yes
N	2126	1953	2080	2110	2121	2137
R^2	0.141	0.136	0.137	0.333	0.287	0.168

Note: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. p-values in parentheses, standard errors clustered at the ward level (N = 53).

Table 6: School attendance (age 5-14)

	(1)	(2)	(3)	(4)	(5)	(6)
IDP	-0.078*** (0.004)		-0.078*** (0.004)	-0.062** (0.016)	-0.062** (0.017)	-0.062** (0.018)
Female		-0.019* (0.087)	-0.021* (0.064)	-0.004 (0.740)	-0.004 (0.734)	-0.004 (0.733)
IDP x Female				-0.033* (0.060)	-0.033* (0.058)	-0.033* (0.058)
Age	0.019*** (0.000)	0.020*** (0.000)	0.019*** (0.000)	0.019*** (0.000)	0.019*** (0.000)	0.019*** (0.000)
Head gender	Yes	Yes	Yes	Yes	Yes	Yes
HH size	No	No	No	No	Yes	No
No. of adults	No	No	No	No	No	Yes
No. of children	No	No	No	No	No	Yes
Ward FE	Yes	Yes	Yes	Yes	Yes	Yes
N	5445	5445	5445	5445	5445	5445
R^2	0.121	0.116	0.122	0.122	0.122	0.122

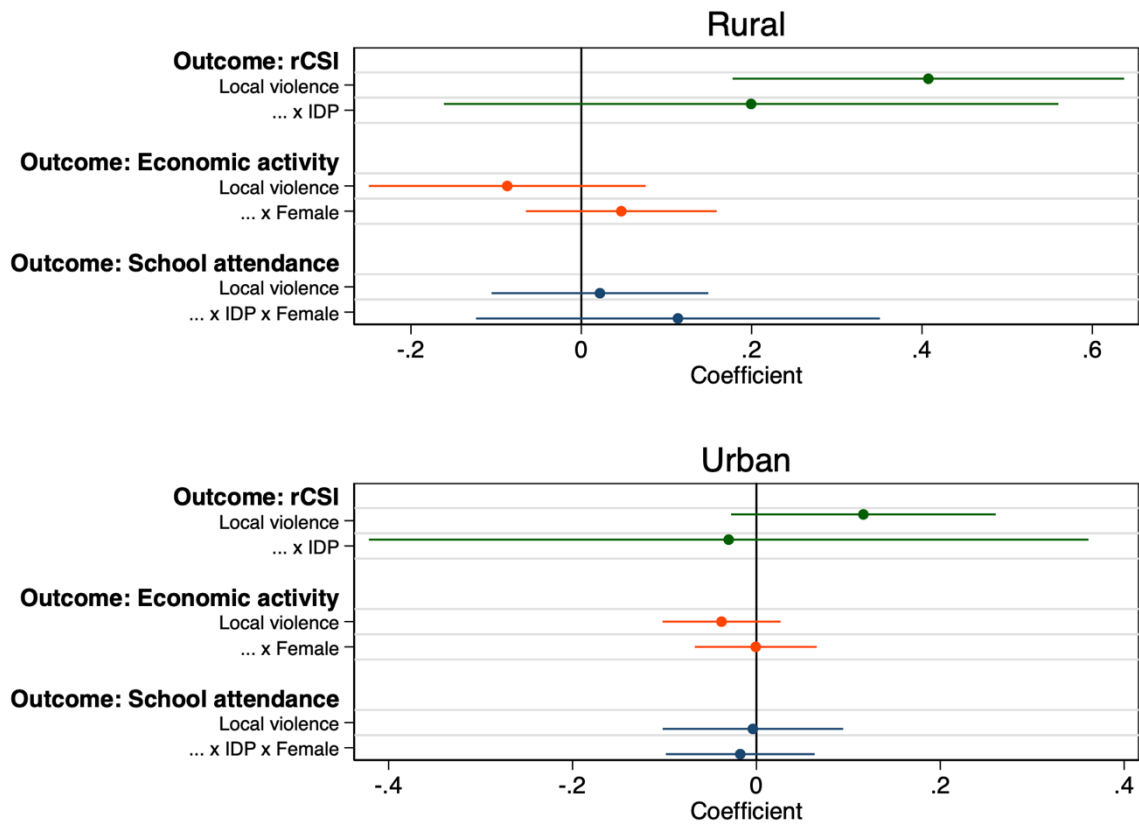
Note: * p < 0.1, ** p < 0.05, *** p < 0.01. p-values in parentheses, standard errors clustered at the ward level (N = 53).

Table 7: Financial hardship as reason for not attending school

	(1)	(2)	(3)	(4)
IDP	0.126** (0.031)	0.134** (0.016)	0.132** (0.017)	0.133** (0.017)
Female	-0.026 (0.364)	-0.024 (0.397)	-0.022 (0.434)	-0.023 (0.434)
IDP x Female	0.009 (0.842)	0.008 (0.856)	0.006 (0.885)	0.008 (0.863)
Household size		0.009 (0.169)	0.005 (0.498)	0.012 (0.106)
No. of adults - No. of children			-0.029*** (0.001)	
No. of working females - No. of working males				0.050*** (0.007)
Age	Yes	Yes	Yes	Yes
Head gender	Yes	Yes	Yes	Yes
Ward FE	Yes	Yes	Yes	Yes
N	1417	1417	1417	1417
R^2	0.160	0.162	0.177	0.172

Note: * p < 0.1, ** p < 0.05, *** p < 0.01. p-values in parentheses, standard errors clustered at the ward level (N = 53). Sample includes all children aged 5-14 who are currently not attending school.

Figure 4: Local violence shocks



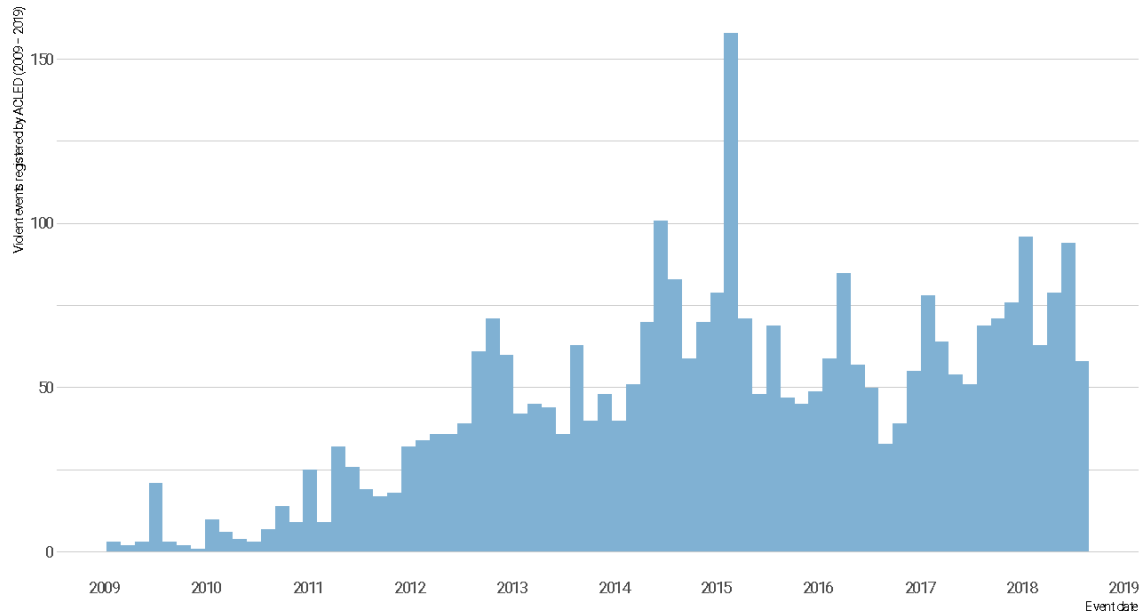
Note: The figure displays coefficients and 95% confidence intervals from six separate linear regression models, which add direct and interaction terms of local violence to the basic specifications. See Tables A3-A5 for further details.

Appendix

A1 Additional figures

Figure A1: Violence and displacement over time

(a) Violence over time (source: ACLED)



(b) Displacement over time (source: survey data)

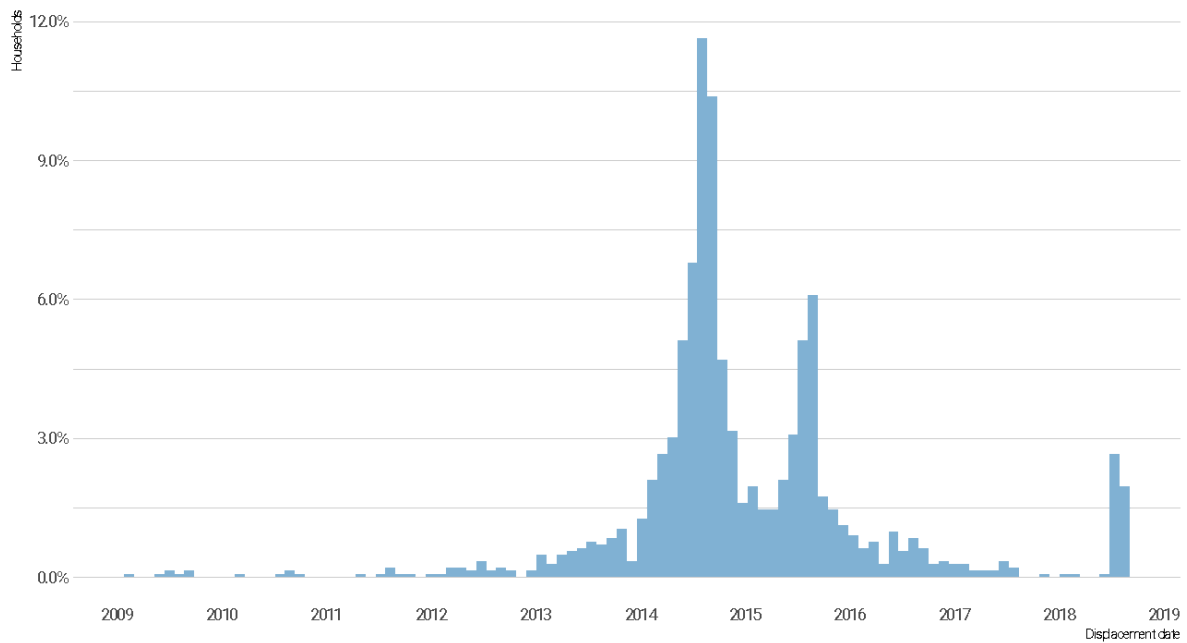
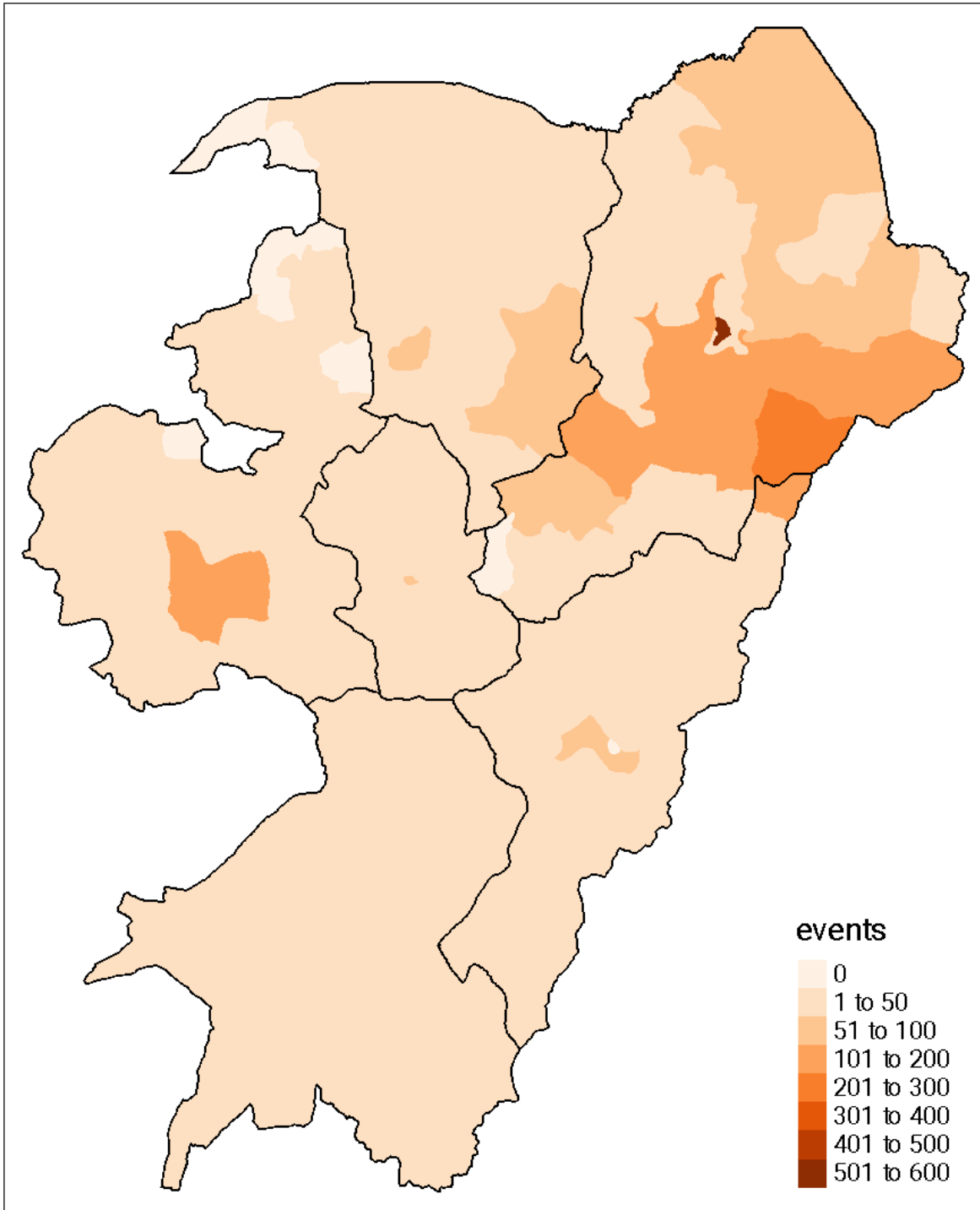
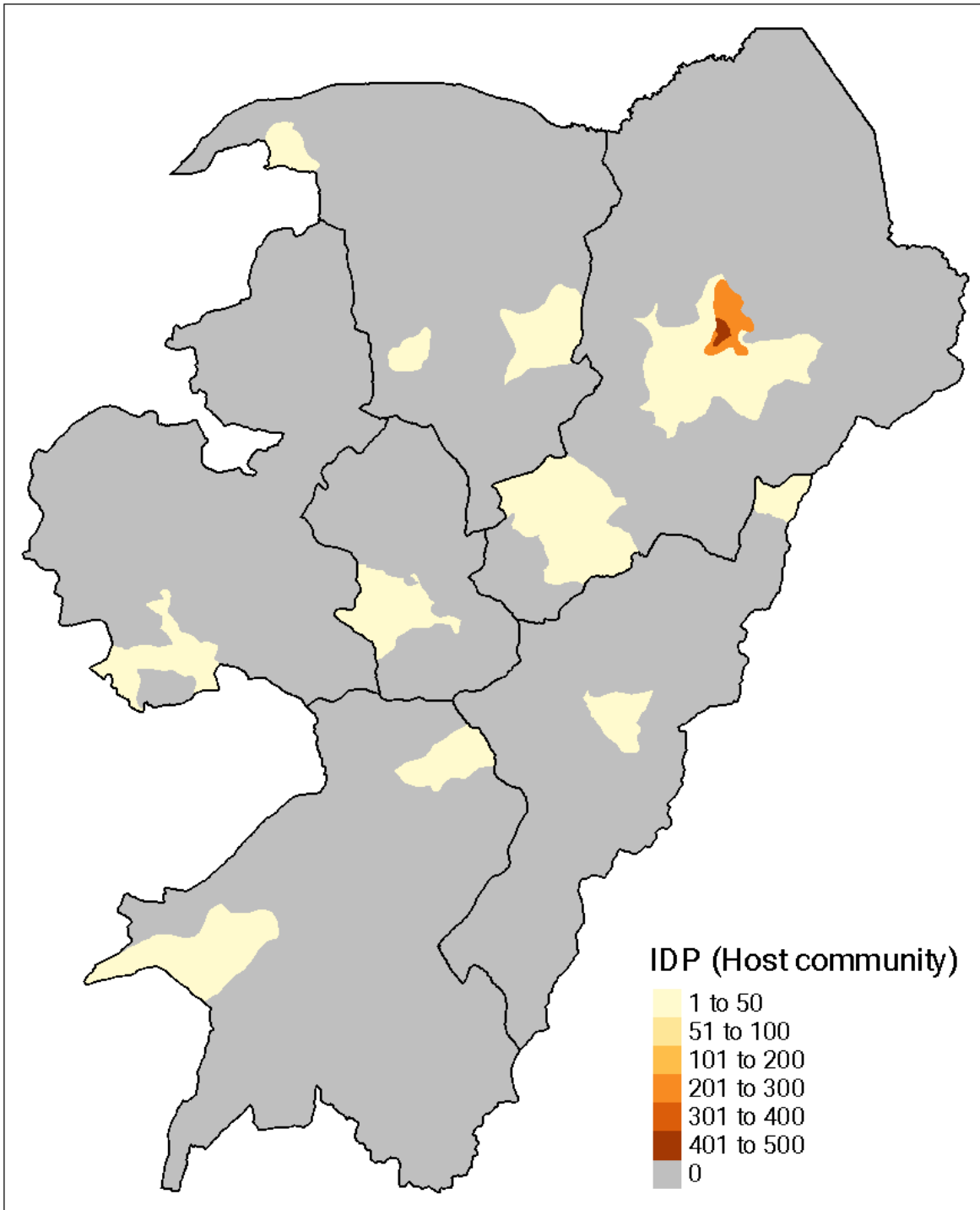


Figure A2: Spatial spread of local violence and study sample

(a) Violence across LGAs, 2009-2018 (source: ACLED)



(b) Sample: surveyed host communities across LGAs



(c) Sample: surveyed camps across LGAs

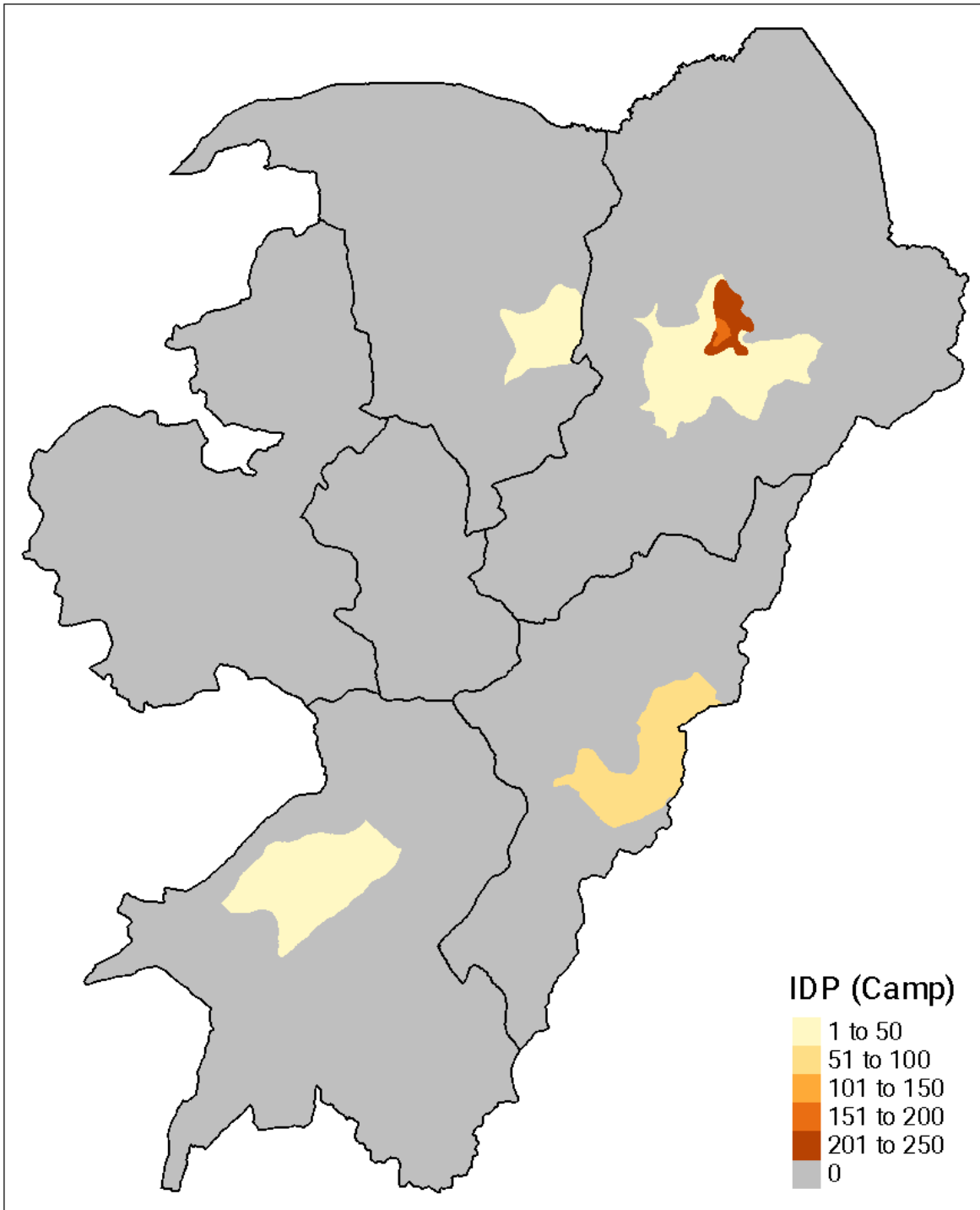
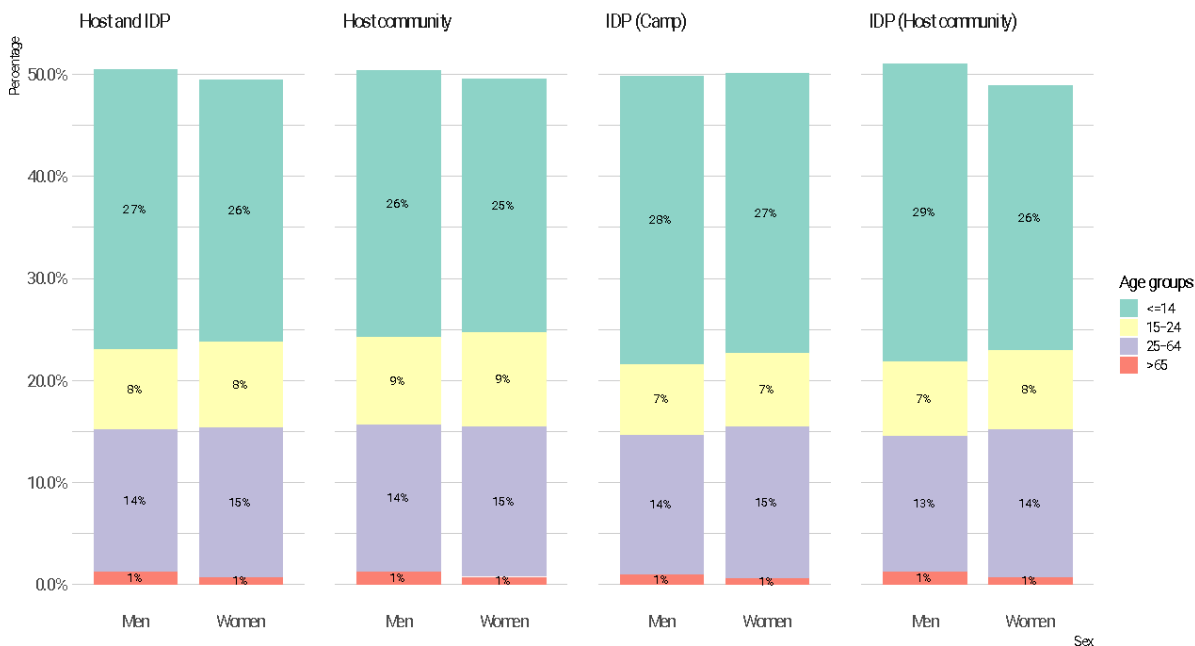


Figure A3: Sex, age, and IDP status

(a) Full sample



(b) Household heads

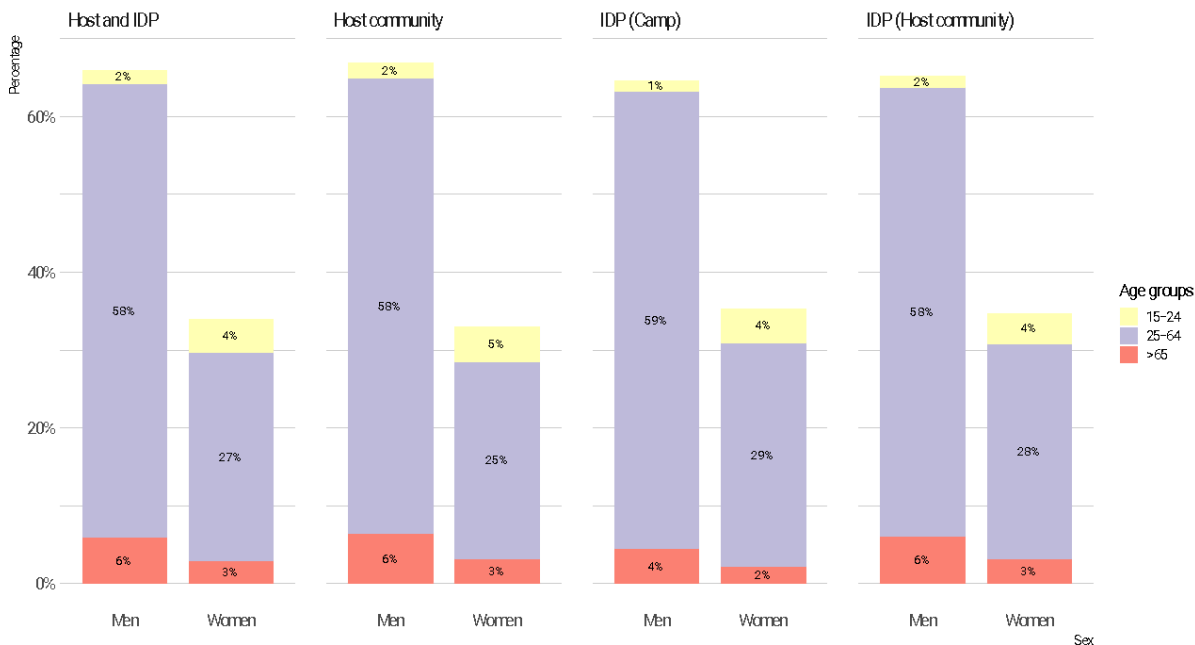
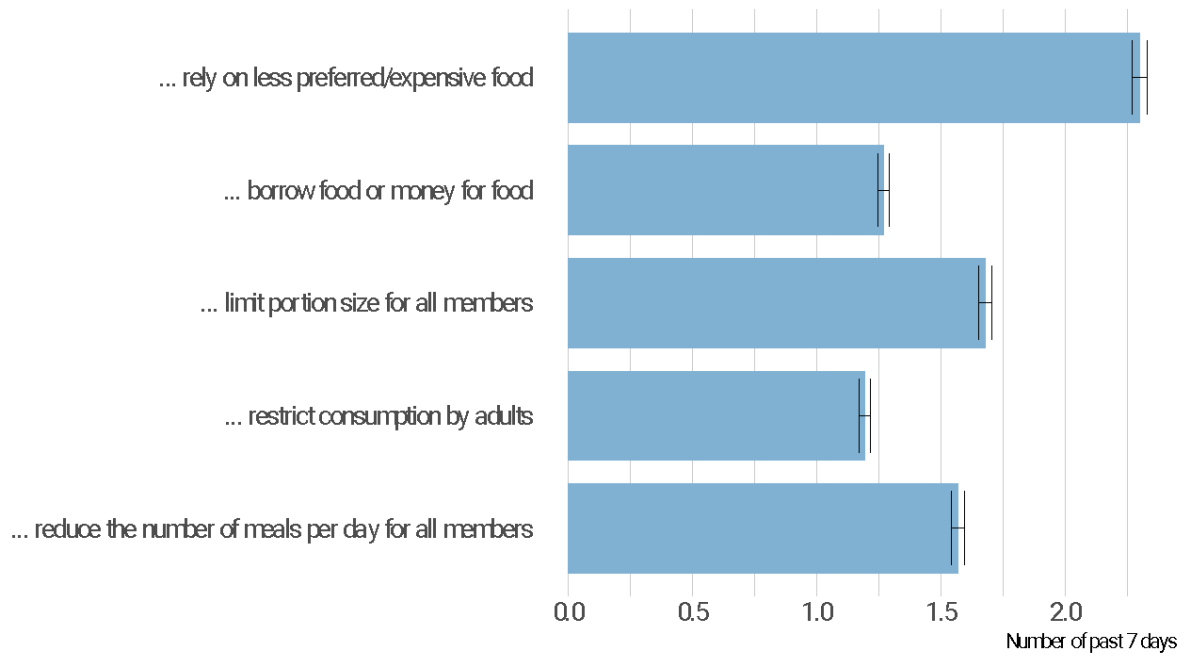
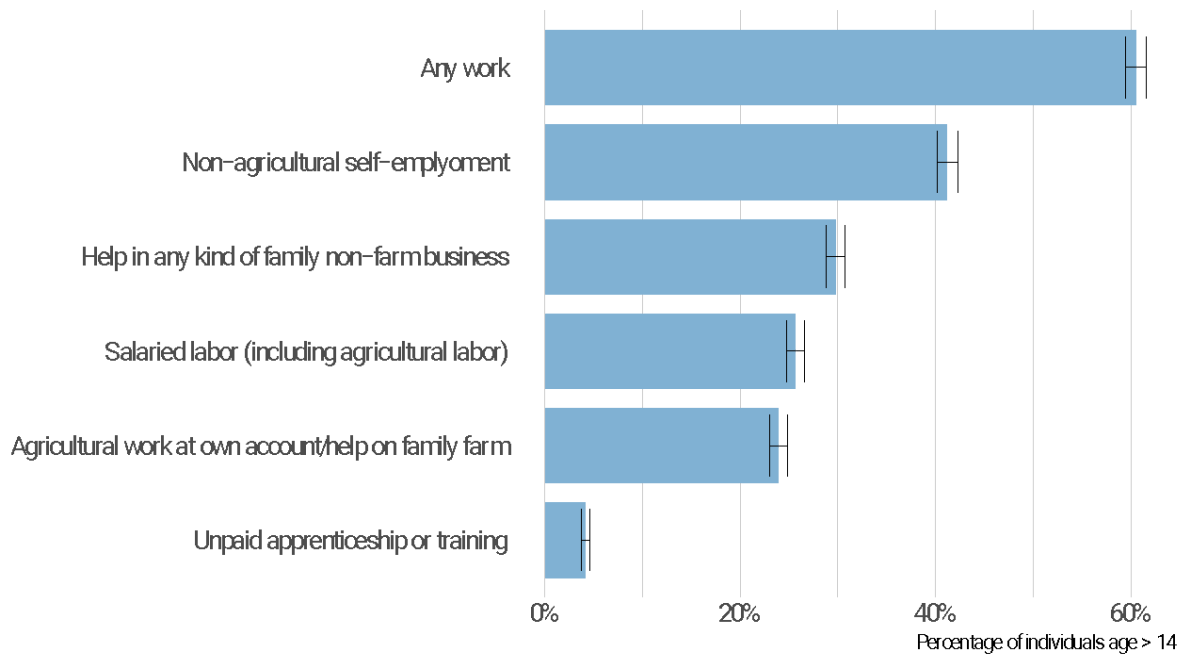


Figure A4: Detailed information on key outcome variables

(a) Consumption (household). Number of days in the past 7 days that a household had to...



(b) Economic activity (age > 14)



(c) School attendance (age 6-14)

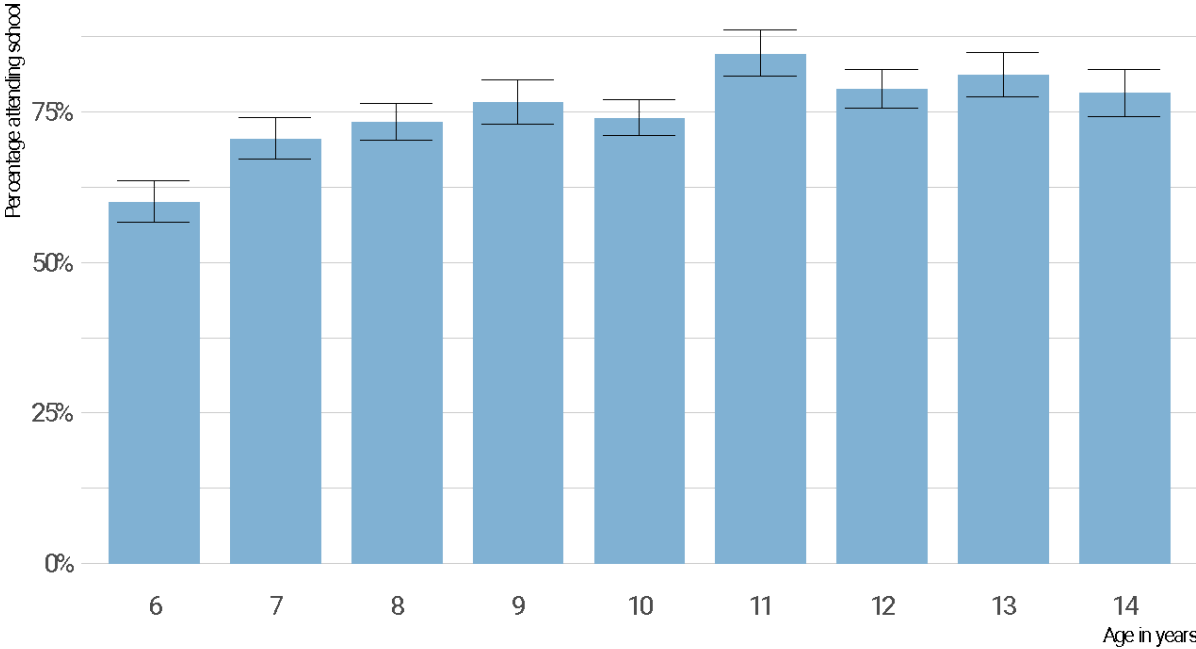
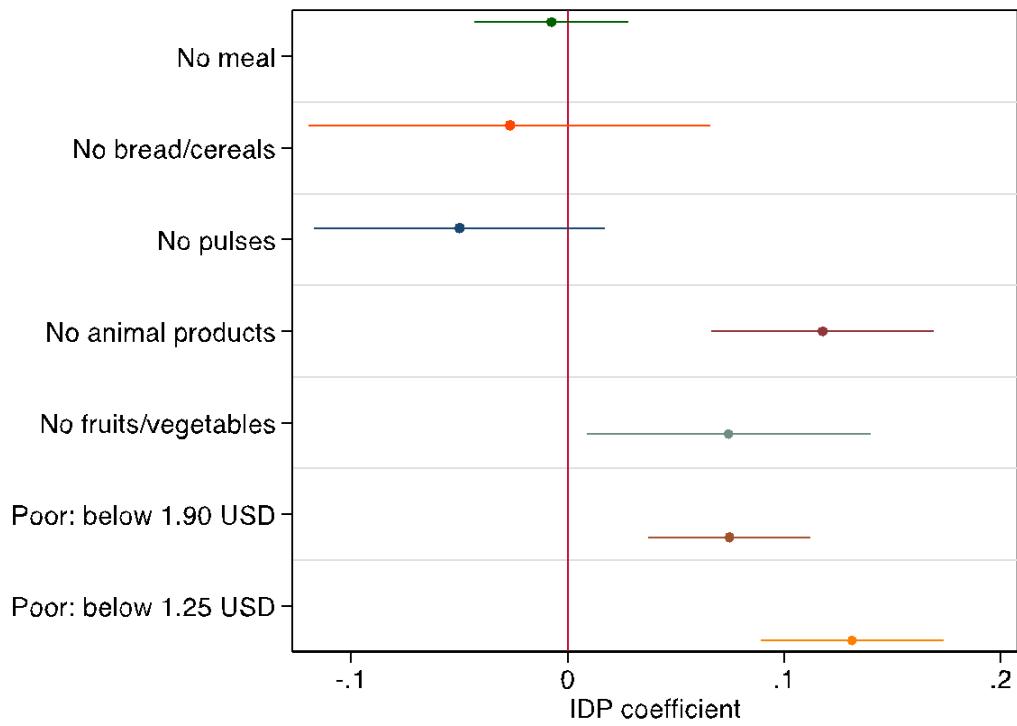


Figure A5: Food items and poverty measures



Note: The figure displays coefficients and 95% confidence intervals from seven separate linear regression models. In each model, we use the specification from column 5 in Table 3.

A2 Additional tables

Table A1: Poverty and consumption

	Mean	SD	Min	Max	N
Poverty and expenditure (household)					
Below 1.90 USD poverty line	0.84	0.36	0	1	2893
Food expenditures (pc/day, Naira)	33.13	154.64	0	6381	2893
Non-food expenditures (pc/day, Naira)	40.32	93.52	0	2823	2893
Food consumption past 7 days (household)					
No meal in the past 7 days	0.04	0.21	0	1	1441
No bread in the past 7 days	0.49	0.50	0	1	1439
No pulses in the past 7 days	0.71	0.45	0	1	1440
No meat or dairy in the past 7 days	0.70	0.46	0	1	1440
No fruits in the past 7 days	0.59	0.49	0	1	1441

Note: The sample size for the detailed information on food items is lower, because the questions were only asked for a randomly selected sub-sample.

Table A2: Economic activity (age > 14): separate activities

	Paid labor	Own Business	Help	Farm (own account)	Apprenticeship
Female	-0.245*** (0.000)	-0.120*** (0.000)	-0.049*** (0.000)	-0.137*** (0.000)	-0.034*** (0.003)
IDP	-0.009 (0.560)	0.028 (0.477)	-0.010 (0.838)	-0.021 (0.353)	0.001 (0.962)
Age	Yes	Yes	Yes	Yes	Yes
HH size	Yes	Yes	Yes	Yes	Yes
Ward FE	Yes	Yes	Yes	Yes	Yes
N	6909	6913	6902	6897	6865
R^2	0.107	0.087	0.082	0.227	0.024

Note: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. p-values in parentheses, standard errors clustered at the ward level (N = 53).

Table A3: rCSI (household) and local violence

	Urban				Rural			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Local violence	0.099 (0.111)	0.105* (0.066)	0.116 (0.107)	0.119* (0.100)	0.482*** (0.000)	0.464*** (0.000)	0.407*** (0.001)	0.421*** (0.001)
IDP		0.335*** (0.000)	0.342*** (0.001)	0.321*** (0.001)		0.473*** (0.000)	0.331** (0.041)	0.333** (0.037)
IDP x Local violence			-0.030 (0.874)	-0.034 (0.859)			0.199 (0.262)	0.192 (0.280)
Head gender	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
HH size	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
DD adults-children	No	No	No	Yes	No	No	No	Yes
DD active	No	No	No	Yes	No	No	No	Yes
LGA FE	Yes	Yes	Yes	Yes	No	No	No	No
State FE	No	No	No	No	Yes	Yes	Yes	Yes
N	1863	1863	1863	1863	395	395	395	394
R^2	0.026	0.051	0.051	0.061	0.087	0.143	0.145	0.148

Note: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. p-values in parentheses, HC2 standard errors. DD adults-children is the difference between the number of adults and the number of children in the household. DD active is the difference between the number of economically active women and the number of economically active men in the household.

Table A3: Economic activity (age > 14) and local violence

	Urban			Rural		
	(1)	(2)	(3)	(4)	(5)	(6)
Local violence	-0.045 (0.206)	-0.045 (0.215)	-0.063* (0.093)	-0.072 (0.353)	-0.065 (0.404)	-0.087 (0.277)
Female		-0.176*** (0.000)	-0.185*** (0.000)		-0.184*** (0.000)	-0.216*** (0.000)
Female x Local violence			0.037 (0.145)			0.047 (0.391)
IDP status	Yes	Yes	Yes	Yes	Yes	Yes
Age	Yes	Yes	Yes	Yes	Yes	Yes
Head gender	Yes	Yes	Yes	Yes	Yes	Yes
HH size	Yes	Yes	Yes	Yes	Yes	Yes
LGA FE	Yes	Yes	Yes	No	No	No
State FE	No	No	No	Yes	Yes	Yes
N	5170	5170	5170	1351	1350	1350
R^2	0.070	0.101	0.101	0.061	0.100	0.100

Note: * p < 0.1, ** p < 0.05, *** p < 0.01. p-values in parentheses, HC2 standard errors.

Table A4: School attendance (age 6-14) and local violence

	Urban			Rural		
	(1)	(2)	(3)	(4)	(5)	(6)
Local violence	0.025 (0.553)	0.025 (0.556)	-0.004 (0.936)	-0.072 (0.638)	-0.067 (0.610)	-0.057 (0.682)
IDP x Female x Local violence			-0.018 (0.655)			0.080 (0.477)
Age	Yes	Yes	Yes	Yes	Yes	Yes
Head gender	Yes	Yes	Yes	Yes	Yes	Yes
IDP	Yes	Yes	Yes	No	Yes	Yes
Female	No	Yes	Yes	No	Yes	Yes
IDP x Female	No	No	Yes	No	No	Yes
Female x Local violence	No	No	Yes	No	No	Yes
IDP x Local violence	Yes	Yes	Yes	No	No	Yes
HH size	Yes	Yes	Yes	Yes	Yes	Yes
LGA FE	Yes	Yes	Yes	No	No	No
State FE	No	No	No	Yes	Yes	Yes
N	3465	3465	3465	719	719	719
R^2	0.039	0.039	0.040	0.023	0.045	0.047

Note: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. p-values in parentheses, HC2 standard errors.