

Linking armed conflicts and children malnutrition in Nigeria: the mitigating effects of maternal bargaining power

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Context and motivation

- Research consistently indicates that children are at a higher risk of experiencing **malnutrition** in the context of armed conflict (Mansour, Rees, 2012; Minoiu, Shemyakina, 2014; Ekhatior-Mobayode, Asfaw, 2019).
 - certain flaw due to the **heterogeneity** of the studied population.
- Out of the various factors contributing to heterogeneity, the level of **Bargaining Power** (BP) held by mothers of the children is particularly crucial (Duflo, 2003; Qian, 2008; Lépine, Strobl, 2013).
 - the impact of conflicts' exposure on children's nutrition would vary between those born to mothers with **high** and **low** BP.

Research question

Research question

Can maternal BP play a mitigating role that could reduce the negative impact of armed conflict exposition on children's undernutrition?

Strategy

I use the case study of Boko Haram (BH) in Nigeria as:

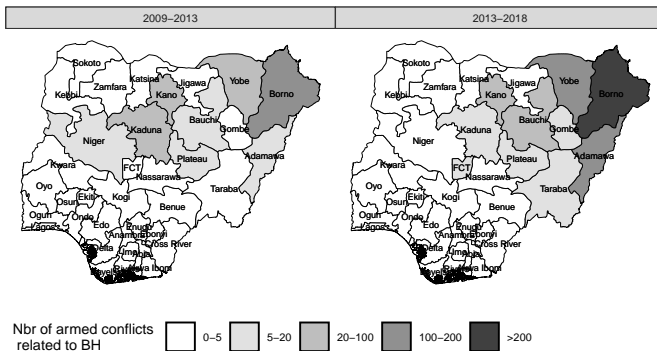
- decrease in total **agricultural output** (Adelaja, George, 2019);
- higher level of **food insecurity** (Kaila, Azad, 2023) particularly affecting children (Ekhatior-Mobayode, Asfaw, 2019);
- affects access to **maternal healthcare** services (Chukwuma, Ekhatior Mobayode, 2019).

Contribution

- It is already known that:
 - conflict exposition increases the risk of malnutrition;
 - BP promotes child nutrition in a context of peace.
- The contributions of this paper:
 - analyzing one source of heterogeneity \implies the role of maternal BP;
 - investigating the role of BP during an ongoing crisis;
 - enhancing understanding of the channels through which BP promotes children's nutrition \iff mechanism.

Data sources

Figure: Number of armed conflicts related to BH with at least one fatality by state in Nigeria.



N = 37 states. From 2009 to 2018, 2049 armed conflicts related to BH occurred in Nigeria. The northeastern states accounting for 92 percent of them. Around 82 percent of them happen between 2013 and 2018
Data source: ACLED (Author's own calculation).

Data sources

- The individual characteristics are drawn from three rounds of the Nigerian Demographic and Health Survey (NDHS) collected in 2008, 2013 and 2018:
 - the sample is composed of 35,339 children (between 0 and 5) born to 27,047 mothers.
- The outcome variables include child's anthropometric indicators:
 - Weight for Height Z-score (WHZ) \sim short term;
 - **Weight for Age Z-score (WAZ)** \sim medium term.
 - Height for Age Z-score (HAZ) \sim long term;

[▶ see](#)

How can the exposure of conflicts be defined?

- There are various definitions of exposure to conflicts in the literature:
 - some are based on the geographic location of individuals (Camacho, 2008; Mansour, Rees, 2012) \implies false treatment or intensity of exposure;
 - others authors use a narrower buffer zones (1 to 10km) in radius (Chukwuma, Ekhatior Mobayode, 2019; Howell et al., 2020; Eseosa Ekhatior-Mobayode et al., 2022) \implies selection bias or few treated (loss of power).
- Exposition variable: nbr of conflict BH related which happen between the child date of birth till the day of the interview within a buffer zone of **10 km** of the hh. cluster (4.45 percent of the children are threatened).

How can BP be defined ?

Various proxies are used in the literature to assess women's BP in the household:

- some are based on **direct** measures: decision making ability on major hh. purch., daily expenditures (Shroff et al., 2011; Story, Burgard, 2012);
- some others use **indirect** proxies: spouses age gap, gap in the level of education, working status, earnings (Duflo, 2003; Maitra, 2004);
- others build more sophisticated indicators of BP using both **direct** and **indirect** proxies (Reggio, 2011; Lépine, Strobl, 2013).

How can BP be defined?

In a context of conflict, women's increasing BP through access to financial resources can protect children by various ways:

- **ensuring adequate food supply:**
 - purchasing a variety of foods → children have access to a balanced diet.
- **access to health services:**
 - seeking healthcare → preventing or treating children's illnesses.
- **community support networks:**
 - community support networks → improved nutrition and children protection.

How can BP be defined?

- Therefore, considering proxies of maternal BP that indicate access to financial resources (jointly with the husband or alone):
 - decision making ability on major household purchases (such as buying a car, house, land etc...);
 - autonomy on own earnings;
 - autonomy on husband's earnings;
 - earning more than husband.
- These measures are exogenous to the conflict. [▶ table](#)

Stylized facts

Table: Mean outcomes by child's status.

	No conflict 10 km around (N=33741)	At least one con- flict 10 km around (N=1573)	p value
WAZ	-99.33 (135.67)	-143.52 (145.19)	< 0.001
HAZ	-129.32 (192.46)	-142.39 (195.48)	0.009
WHZ	-34.53 (152.36)	-89.30 (168.59)	< 0.001
NbrEvents	—	18.72 (36.21)	

Note : the pvalue of the linear Anova test of the difference in mean variable are reported. The row *nbrEvents* is the count of the number of armed conflicts related to BH within a 10km radius experienced by the children from his **birth till the interview day**. The median value of this number of conflict is 3. Standard deviation are reported in parentheses.

OLS with fixed effects

A baseline model

$$Y_{imc} = \alpha_1 nbrEvents_{ic} \times highBP_{im} + \alpha_2 nbrEvents_{ic} + \alpha_3 highBP_{im} + \alpha_4 X_{imc} + \mu_i^M + \mu_i^Y + \mu_{imc}^{SY} + \mu_{imc}^c + \mu_c^{IM} + \epsilon_{imc}$$

- Y_{imc} are child's i anthropometric indicators (WAZ, HAZ, WHZ);
- $nbrEvents_{ic}$ is the count of armed conflicts related to BH within a 10km radius experienced by child i from his **birth till the interview day**;
- $highBP_{im}$ is the child's i mother m BP level dummy (low or high);
- X_{imc} are child's i and mother m characteristics;
- μ_{im}^c is the cluster FE;
- μ_i^M is the child's month of birth FE;
- μ_i^Y is the child's year of birth FE;
- μ_i^{SY} is the survey year FE;
- μ_c^{IM} represents the interview month FE.
- This model has a limitation due to **unobservable heterogeneity** (woman's health and nutrition knowledge, genetic predispositions or care practices and hygiene etc). \implies sibling model.

OLS with fixed effects

A sibling model

$$Y_{imc} = \beta_1 \text{nbrEvents}_{ic} \times \text{highBP}_{im} + \beta_2 \text{nbrEvents}_{ic} + \beta_3 X_{ict} + \mu_{im}^m + \mu_i^M + \mu_i^Y + \mu_c^{IM} + \epsilon_{imc}$$

- Y_{imc} are child's i anthropometric indicators (WAZ, HAZ, WHZ);
- nbrEvents_{ic} is the count of armed conflicts related to BH within a 10km radius experienced by the child i from **birth to the interview day**;
- highBP_{im} is the child's i mother m BP level dummy (low or high);
- X_{ic} are child's i characteristics;
- μ_{im}^m is the mother's FE;
- μ_i^M is the child's month of birth FE;
- μ_i^Y is the child's year of birth FE;
- μ_c^{IM} represents the interview month FE.

First estimates

Table: The estimated effect of the BH conflict on WAZ.

	<i>Specification:</i>					
	(1)	(2)	(3)	(4)	(5)	(1)
		aut. maj.	aut. own	aut. on	earn. more	Sibling
		hh purch.	earn.	husb. earn.	than husb.	
Outcome variable: Weight for Age Z-Score (WAZ)						
Nbr events	-0.46*** (0.13)	-0.46*** (0.13)	-0.46*** (0.13)	-0.46*** (0.13)	-0.46*** (0.13)	-0.57*** (0.22)
High bargaining		1.10 (1.80)	-0.35 (1.74)	-2.39 (1.84)	-1.97 (3.03)	
Mother fixed effects	No	No	No	No	No	Yes
Observations	35,339	35,339	35,339	35,339	35,339	24,970
R ²	0.30	0.30	0.30	0.30	0.30	0.77

* *Note:* the estimated model is an OLS model. The baseline regressions include controls for mother ethnicity, her age and age squared, mother and father number of years of education, their working in agriculture sector binaries, the sexe of the head, the number of household members and under five children and the NDHS poverty quantile. The two specifications (baseline and sibling) include controls for child characteristics, such as a binary variable for twin status and gender, child birth order, and current age. The birth month and year of the child and interview's month FE are included in all regressions. Standard errors in parentheses are clustered at the NDHS cluster level. *Significant at the 0.1 level, **Significant at the 0.05 level, ***Significant at the 0.01 level.

First estimates

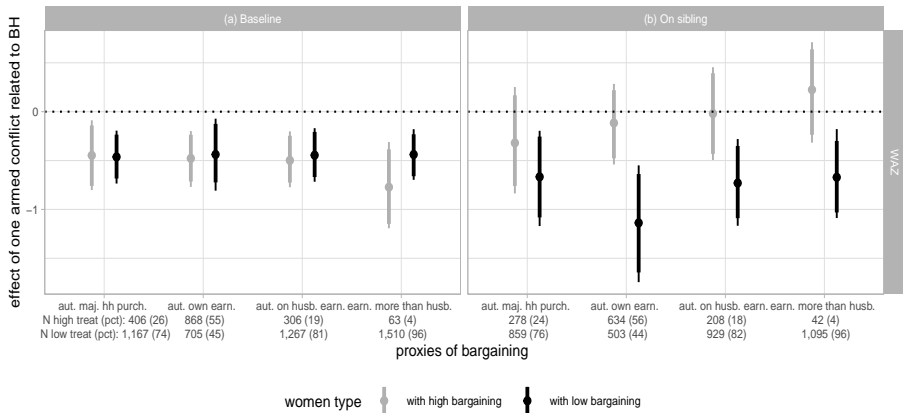
Table: The estimated effect of the BH conflict on the WAZ.

	<i>Specification:</i>							
	Baseline				Sibling			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
	aut. maj. hh purch.	aut. own earn.	aut. on husb. earn.	earn. more than husb.	aut. maj. hh purch.	aut. own earn.	aut. on husb. earn.	earn. more than husb.
	<i>Outcome : Weight for Age Z-Score (WAZ)</i>							
Nbr events	-0.46*** (0.14)	-0.44** (0.18)	-0.44*** (0.14)	-0.44*** (0.13)	-0.67*** (0.26)	-1.14*** (0.30)	-0.73*** (0.23)	-0.67*** (0.23)
Nbr events * High bargaining	0.01 (0.20)	-0.04 (0.20)	-0.05 (0.13)	-0.33 (0.21)	0.35 (0.34)	1.02*** (0.31)	0.71** (0.31)	0.90** (0.38)
High bargaining	1.10 (1.81)	-0.31 (1.75)	-2.35 (1.84)	-1.73 (3.04)				
Mother fixed effects	No	No	No	No	Yes	Yes	Yes	Yes
Observations	35,339	35,339	35,339	35,339	24,970	24,970	24,970	24,970
R ²	0.30	0.30	0.30	0.30	0.77	0.77	0.77	0.77

* *Note:* the estimated model is an OLS model. The baseline regressions include controls for mother ethnicity, her age and age squared, mother and father number of years of education, their working in agriculture sector binaries, the sexe of the head, the number of household members and under five children and the NDHS poverty quantile. The two specifications (baseline and sibling) include controls for child characteristics, such as a binary variable for twin status and gender, child birth order and current age. The birth month and year of the child and interview's month FE are included in all regressions. Standard errors in parentheses are clustered at the NDHS cluster level. * Significant at the 0.1 level, ** Significant at the 0.05 level, *** Significant at the 0.01 level.

First estimates

Figure: The estimated effect of the BH conflict on the WAZ.



N = 35339 children, 24970 siblings.

Selection bias analysis and mechanisms

- Selection bias analysis:

- selective survival \implies **not evidence**; [▶ figure](#)
- short term realised fertility \implies **not evidence**; [▶ figure](#)
- BH conflicts and BP \implies **not evidence**; [▶ table](#)
- migration \implies **not evidence**; [▶ table](#)
- missing data \implies **not evidence**. [▶ table](#)

- Mechanisms:

- child vaccination ; [▶ table](#)
- maternal care (prenatal and postnatal care) ; [▶ table](#)
- barrier to health . [▶ table](#)

Sensitivity analysis

- Sensibility analysis:
 - intrauterine exposure ✓; ▶ figure
 - non migrant ✓; ▶ figure
 - sensibility to the exposition variable (all types of conflicts and dist. to the event) ✓; ▶ figures
 - control for drought ✓; ▶ figure
 - short term (restricting the datasets to the 2008 and 2013 NDHS) ✓; ▶ figure
 - extensive margin ✗. ▶ table

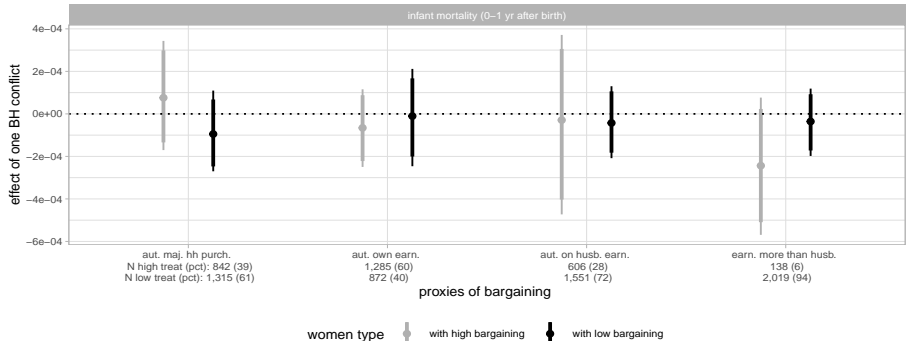
Conclusion

To summarize

Policies designed to mitigate the negative impact of armed conflict exposition on children can exploit progress in maternal BP alongside other potential protective measures.

Bias analysis

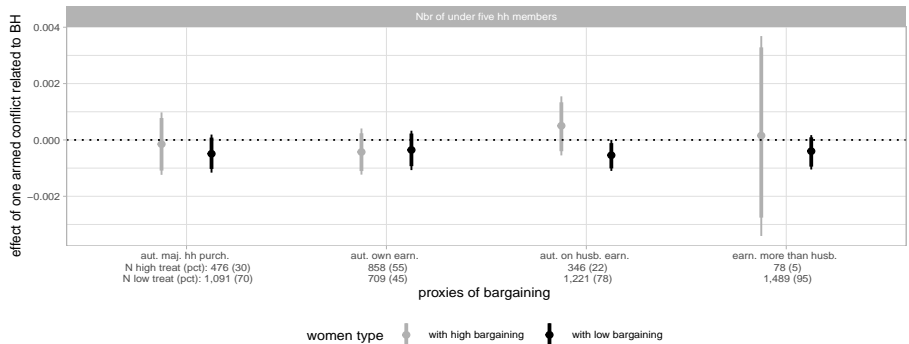
Figure: The effect of one additional BH conflict on infant mortality



N = 27047 households.

Bias analysis

Figure: The effect of one additional BH conflict on the probability of having an alive under five child.



N = 24524 households.

Bias analysis

Table: The effect of one BH conflict on BP.

	<i>Outcome variables</i>			
	aut. maj. hh purch.	aut. own earn.	aut. on husb. earn.	earn. more than husb.
Nbr Events	−0.0003 (0.0012)	−0.0018 (0.0011)	−0.0004 (0.0011)	−0.0020 (0.0021)
Observations	27047	27047	27047	27047
Survey year fixed effects	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes
Pseudo R ²	0.1358	0.1050	0.0908	0.0636

Note : the estimated model is a logit model. The outcome variable is a binary for each proxy of BP. The regressions include controls for woman ethnicity, her age and age squared, woman and husband number of years of education, their working in agriculture sector binaries, the sexe of the head, the number of household members and under five children and the NDHS poverty quantile. Standard errors in parentheses are clustered at the NDHS cluster level. *Significant at the 0.1 level, **Significant at the 0.05 level, ***Significant at the 0.01 level.

Bias analysis

Table: The estimated effect of one BH conflict migration.

	<i>Outcome variable: migrant (Yes = "1", No="0")</i>			
	aut. maj. hh purch.	aut. own earn.	aut. on husb. earn.	earn. more than husb.
Nbr Events	0.0029 (0.0018)	0.0009 (0.0020)	0.0032 (0.0019)	0.0034 (0.0018)
Nbr Event * High bargaining	0.0015 (0.0024)	0.0051* (0.0020)	0.0017 (0.0019)	-0.0008 (0.0057)
High bargaining	-0.1393* (0.0700)	-0.0736 (0.0675)	0.0193 (0.0677)	0.0396 (0.1012)
Observations	24524	24524	24524	24524
Survey year fixed effects	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes
Pseudo R ²	0.4494	0.4496	0.4492	0.4491

Note : the estimated model is a logit model. The outcome variable is a binary for migrant household. The regressions include controls for woman ethnicity, her age and age squared, woman and husband number of years of education, their working in agriculture sector binaries, the sexe of the head, the number of household members and under five children and the NDHS poverty quantile. Standard errors in parentheses are clustered at the NDHS cluster level. * Significant at the 0.1 level, ** Significant at the 0.05 level, *** Significant at the 0.01 level.

Bias analysis

Table: The effect of one BH conflict on the proba of WAZ being missing.

	Outcome variable: WAZ is missing			
	aut. maj. hh purch.	aut. own earn.	aut. on husb. earn.	earn. more than husb.
Nbr Events	−0.01 (0.01)	−0.00 (0.00)	−0.01 (0.01)	−0.01 (0.00)
Nbr Events * High bargaining	0.00 (0.01)	−0.02 (−0.02)	0.00 (0.01)	−10.87*** (0.17)
High bargaining	0.11 (0.07)	−0.24*** (0.07)	0.07 (0.08)	−0.06 (0.15)
Observations	40636	40636	40636	40636
Survey year fixed effects	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes
Pseudo R ²	0.08	0.08	0.07	0.07

Note: the estimated model is a logit model. The outcome is a binary for WAZ being missing. The regressions include controls for mother ethnicity, her age and age squared, mother and father number of years of education, their working in agriculture sector binaries, the sexe of the head, the number of household members and under five children and the NDHS poverty quantile. They also include controls for child characteristics, such as a binary variable for twin status and gender, child birth order, and current age. Standard errors in parentheses are clustered at the NDHS cluster level. *Significant at the 0.1 level, **Significant at the 0.05 level, ***Significant at the 0.01 level.

Mechanisms

Identification strategy

Mechanisms

$$\log \frac{P_{mhc}}{1-P_{mhc}} = \alpha_1 nbrEvents_{hc} \times highBP_m + \alpha_2 nbrEvents_{hc} + \alpha_3 highBP_m + \alpha_4 X_{mhc} + \mu_{mhc}^{SY} + \mu_{mhc}^{St} + \epsilon_{mhc}$$

- P_{mhc} is the probability of a mother m from household h in cluster c engaging in a specific mechanism,
- $nbrEvents_{hc}$ is the count of armed conflicts related to BH within a 10km radius experienced by the household from **2009 to the interview day**;
- $highBP_m$ is the mother m BP level dummy (low or high);
- X_{mhc} are mother's m and household's h characteristics;
- μ_{mhc}^{SY} is the survey year FE (account for the survey's year-specific characteristics);
- μ_{mhc}^{St} is the state FE (account for the state's specific characteristics);

Mechanisms

	<i>Outcome: child vaccination (1 = "Yes" and 0 = "No")</i>			
	aut. maj. hh purch.	aut. own earn.	aut. on husb. earn.	earn. more than husb.
Nbr Events	-0.0032* (0.0014)	-0.0029 (0.0020)	-0.0024 (0.0012)	-0.0024 (0.0013)
Nbr Events * High bargaining	-0.0006 (0.0011)	-0.0010 (0.0037)	-0.0036 (0.0019)	-0.0111*** (0.0012)
High bargaining	0.2120 (0.1449)	0.4326*** (0.0763)	0.0971 (0.1551)	0.0444 (0.1350)
Observations	11586	11586	11586	11586
Survey year fixed effects	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes
Pseudo R ²	0.13	0.14	0.14	0.14

Note : the estimated model is a logit model. The outcome variable is binary, indicating the vaccination status of children between 3 and 5 years old. The vaccines include diphtheria, tetanus, polio (DTP), measles, BCG, and vitamin A. The regressions incorporate controls for mother's ethnicity, her age and age squared, mother and father's number of years of education, their working status in the agriculture sector (binary), the sex of the head of the household, the number of household members, the count of under-five children and the NDHS poverty quantile. They also include controls for child characteristics, such as a binary variable for twin status and gender, child birth order, and current age. Standard errors in parentheses are clustered at the NDHS cluster level. * Significant at the 0.1 level, ** Significant at the 0.05 level, *** Significant at the 0.01 level.

Mechanisms

	<i>Outcome: maternal care (1 = "Yes" and 0 = "No")</i>			
	aut. maj. hh purch.	aut. own earn.	aut. on husb. earn.	earn. more than husb.
Nbr Events	-0.0006 (0.0010)	-0.0016** (0.0006)	-0.0004 (0.0010)	0.0002 (0.0009)
Nbr Events * High bargaining	0.0047*** (0.0007)	0.0058* (0.0027)	0.0130 (0.0085)	-0.0056*** (0.0007)
High bargaining	0.3305*** (0.0762)	0.2165** (0.0692)	0.3062*** (0.0882)	0.2205 (0.1253)
Observations	20092	20092	20092	20092
Survey year fixed effects	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes
Pseudo R ²	0.35	0.35	0.35	0.35

Note : maternal care include postnatal (after child birth) and antenatal care (before child birth). They aim to create a supportive environment in which families will be guided by professionals in how to take care for their baby (before and after they are born) and themselves and be able to recognize and act upon any deviation from the normal. It can help in detecting early the nutritional needs of the children. The estimated model is a logit model. The outcome variable is a binary for any prenatal or postnatal care the woman is provided. The regressions incorporate controls for mother's ethnicity, her age and age squared, mother and father's number of years of education, their working status in the agriculture sector (binary), the sex of the head of the household, the number of household members, the count of under-five children and the NDHS poverty quantile. Standard errors in parentheses are clustered at the NDHS cluster level. *Significant at the 0.1 level, ** Significant at the 0.05 level, *** Significant at the 0.01 level.

Mechanisms

Table: The effect of one additional BH conflict on barriers to health.

	<i>Outcome: barriers to health (1 = "Yes" and 0 = "No")</i>			
	aut. maj. hh purch.	aut. own earn.	aut. on husb. earn.	earn. more than husb.
Nbr Events	0.0026*** (0.0005)	0.0035*** (0.0005)	0.0019** (0.0006)	0.0014** (0.0005)
Nbr Events * High bargaining	-0.0038*** (0.0006)	-0.0046*** (0.0008)	-0.0030* (0.0015)	0.0034 (0.0020)
High bargaining	0.0677 (0.1103)	-0.0989 (0.0720)	-0.0706 (0.1021)	-0.1262 (0.0963)
Observations	20134	20134	20134	20134
Survey year fixed effects	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes
Pseudo R ²	0.14	0.14	0.14	0.14

Note : barriers to health access can play an important role in preventing women and their children from having access to proper healthcare. In the NDHS, women were asked if they think that husband's permission, the lack of money, not wanting to go alone and distance to the facility are barriers to health for them. I create a binary variable which takes the value of 1 if the child's mother face at least one barrier and 0 otherwise. The estimated model is a logit model. The regressions incorporate controls for mother's ethnicity, her age and age squared, mother and father's number of years of education, their working status in the agriculture sector (binary), the sex of the head of the household, the number of household members, the count of under-five children and the NDHS poverty quantile. Standard errors in parentheses are clustered at the NDHS cluster level.*Significant at the 0.1 level, **Significant at the 0.05 level, ***Significant at the 0.01 level.

Mechanisms

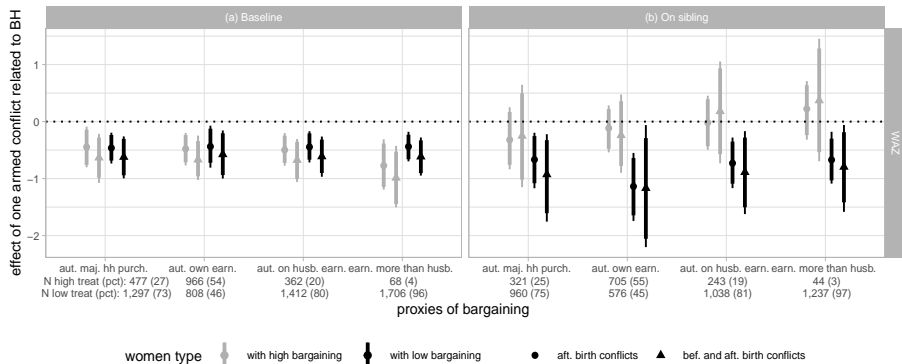
Table: The effect of one additional BH conflict on health insurance.

	<i>Outcome: health insurance (1 = "Yes" and 0 = "No")</i>			
	aut. maj. hh purch.	aut. own earn.	aut. on husb. earn.	earn. more than husb.
Nbr Events	0.0014 (0.0010)	0.0027* (0.0012)	0.0030*** (0.0008)	0.0039*** (0.0008)
Nbr Events * High bargaining	0.0036* (0.0014)	0.0019 (0.0014)	0.0032** (0.0012)	−0.0275 (0.0251)
High bargaining	0.0408 (0.1296)	0.0507 (0.1643)	−0.0262 (0.1202)	0.3708** (0.1251)
Observations	20134	20134	20134	20134
Survey year fixed effects	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes
Pseudo R ²	0.2298	0.2297	0.2297	0.2309

Note : health insurance can play a major role on children nutritional status as it promote healthcare services utilization. 2.31% of the households in the sample have health insurance. 6.23% of the BH conflict exposed households have access to health insurance. The estimated model is a logit model. The regressions incorporate controls for mother's ethnicity, her age and age squared, mother and father's number of years of education, their working status in the agriculture sector (binary), the sex of the head of the household, the number of household members, the count of under-five children and the NDHS poverty quantile. Standard errors in parentheses are clustered at the NDHS cluster level. * Significant at the 0.1 level, ** Significant at the 0.05 level, *** Significant at the 0.01 level.

Sensitivity analysis

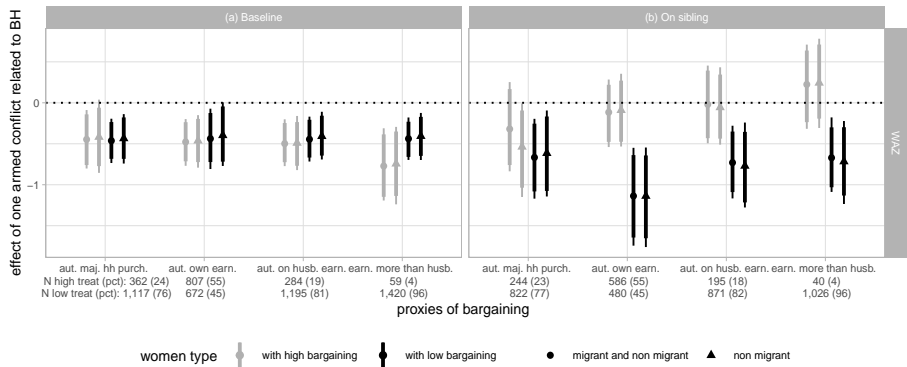
Figure: The effect of one additional BH conflict on malnutrition.



N = 35339 children, 24970 siblings.
The nbr of observations for the alternative specification is shown on the x-axis.

Sensitivity analysis

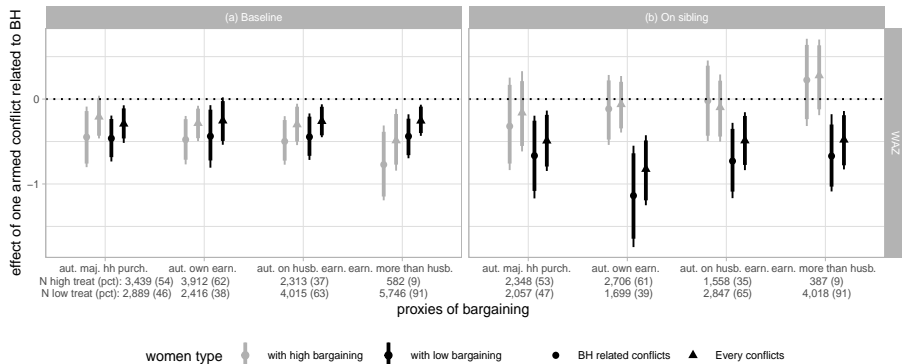
Figure: The effect of one additional BH conflict on malnutrition for migrant and non migrant



N = 32303 non migrant children, 22969 non migrant sibling.
The nbr of observations for the alternative specification is shown on the x-axis.

Sensitivity analysis

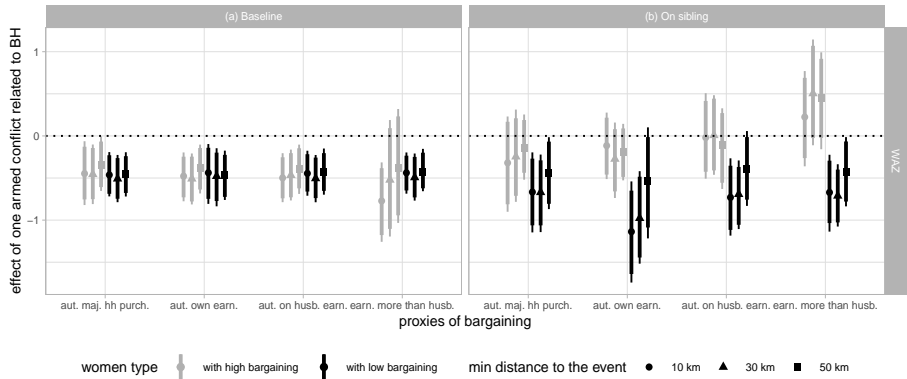
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Sensitivity analysis

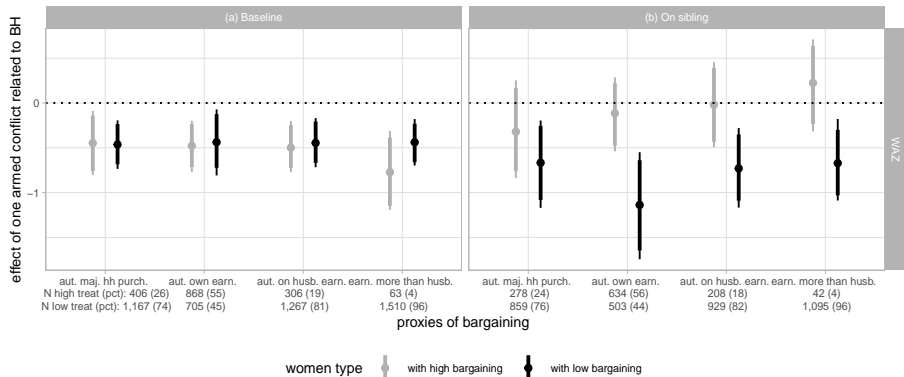
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Sensitivity analysis

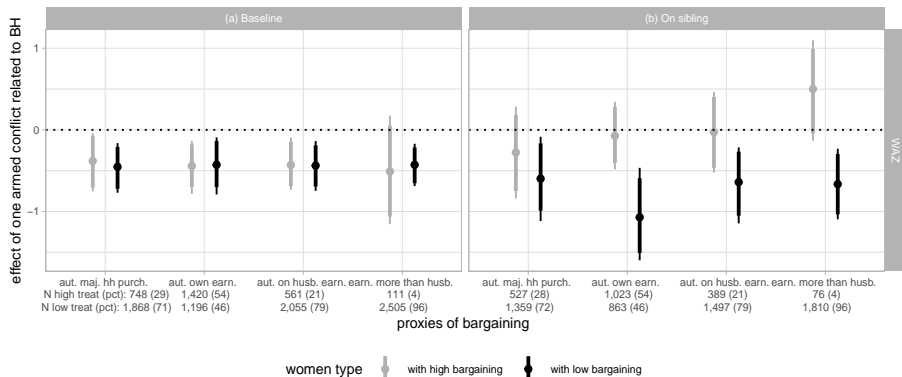
Figure: The effect of one additional BH conflict on malnutrition (10 km).



N = 35339 children, 24970 siblings.

Sensitivity analysis

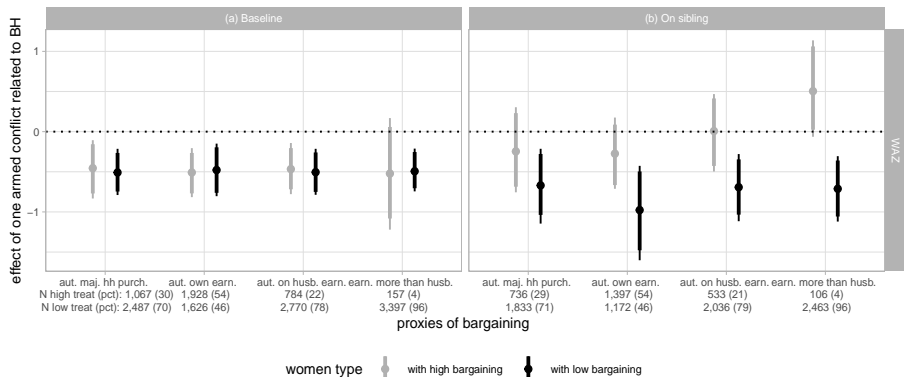
Figure: The effect of one additional BH conflict on malnutrition (20 km).



N = 35339 children, 24970 siblings.

Sensitivity analysis

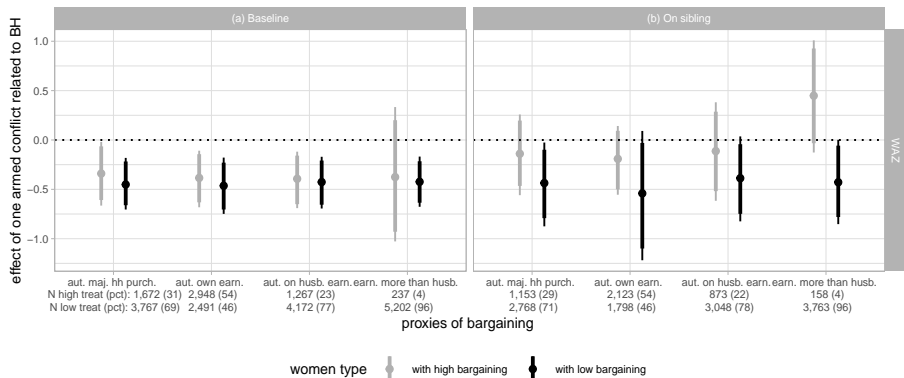
Figure: The effect of one additional BH conflict on malnutrition (30 km).



N = 35339 children, 24970 siblings.

Sensitivity analysis

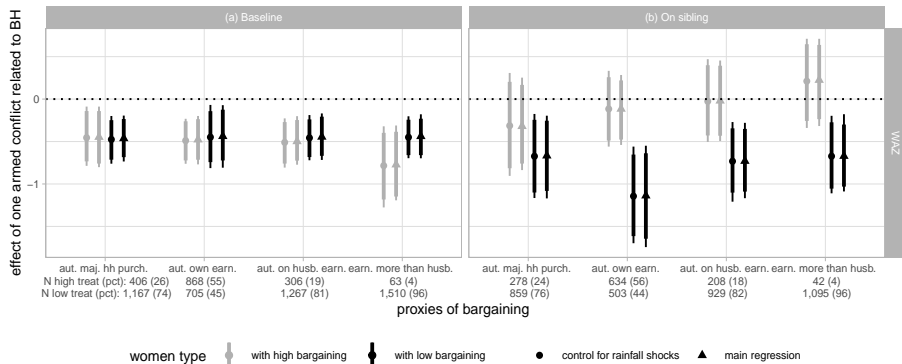
Figure: The effect of one additional BH conflict on malnutrition (50 km).



N = 35339 children, 24970 siblings.

Sensitivity analysis

Figure: The effect of one additional BH conflict on malnutrition.



N = 35339 children, 24970 siblings.

The nbr of observations for the alternative specification is shown on the x-axis.

Sensitivity analysis

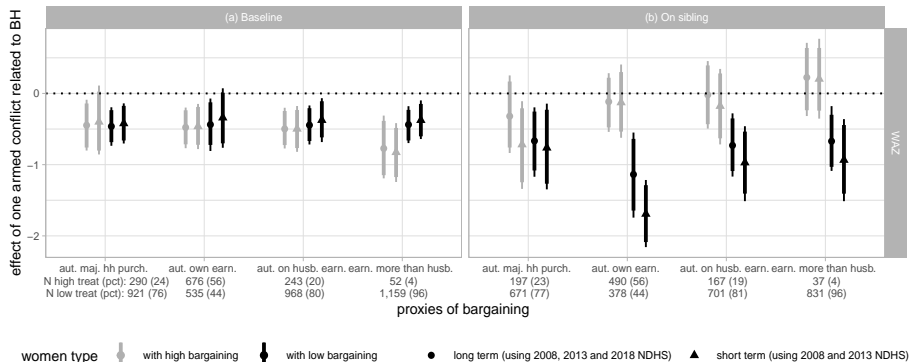
Table: The estimated effect of one BH conflict on the WAZ.

	<i>Specification:</i>							
	Baseline				Sibling			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
	aut. maj. hh purch.	aut. own earn.	aut. on husb. earn.	earn. more than husb.	aut. maj. hh purch.	aut. own earn.	aut. on husb. earn.	earn. more than husb.
<i>Outcome : Weight for Age Z-Score (WAZ)</i>								
Exposed Binary	-6.39 (8.44)	-6.03 (9.33)	-9.38 (8.32)	-8.13 (8.00)	-9.07 (9.75)	-16.15 (13.85)	-8.23 (10.18)	-3.47 (9.51)
Exposed Binary * High bargaining	-8.29 (11.42)	-5.42 (8.62)	1.72 (12.88)	-26.13 (16.50)	18.52 (20.89)	23.23 (18.97)	21.35 (22.71)	0 (0.00)
High bargaining	1.33 (1.81)	-0.08 (1.78)	-2.46 (1.84)	-1.25 (3.08)				
Survey year FE	Yes	Yes	Yes	Yes	No	No	No	No
Cluster FE	Yes	Yes	Yes	Yes	No	No	No	No
Mother FE	No	No	No	No	Yes	Yes	Yes	Yes
Observations	35,339	35,339	35,339	35,339	24,970	24,970	24,970	24,970
R ²	0.30	0.30	0.30	0.30	0.77	0.77	0.77	0.77

* Note: the estimated model is an OLS model. The baseline regressions include controls for mother ethnicity, her age and age squared, mother and father number of years of education, their working in agriculture sector binaries, the sexe of the head, the number of household members and under five children and the NDHS poverty quantile. The two specifications (baseline and sibling) include controls for child characteristics, such as a binary variable for twin status and gender, child birth order and current age. The birth month and year of the child are included in all regressions. The birth month and year of the child and interview's month FE are included in all regressions. Standard errors in parentheses are clustered at the NDHS cluster level. * Significant at the 0.1 level, ** Significant at the 0.05 level, *** Significant at the 0.01 level.

Sensitivity analysis

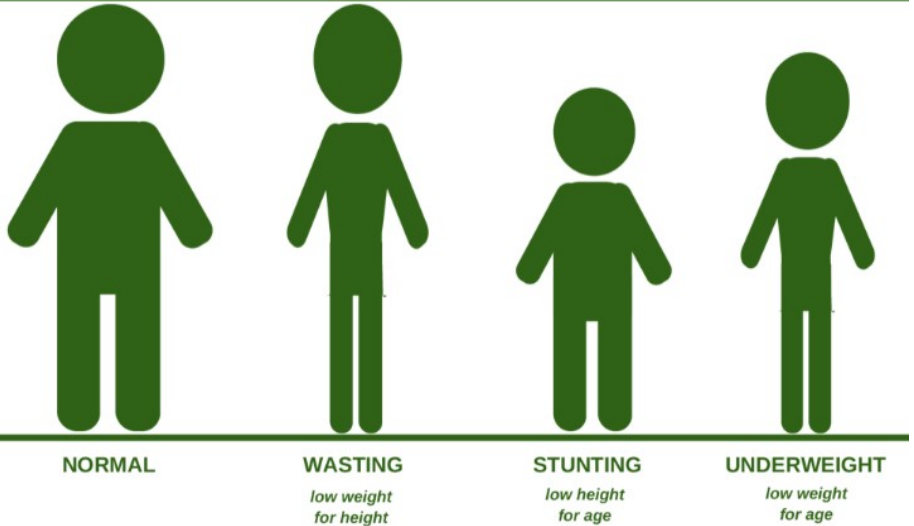
Figure: The effect of one additional BH conflict on malnutrition.



N = 27609 children, 19554 siblings.

The nbr of observations for the alternative specification is shown on the x-axis.

Malnutrition



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