

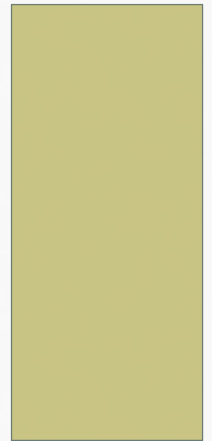


VIOLENCE: FROM THE POLITICAL TO THE PERSONAL

Examining Links between Conflict and Interpersonal Violence in Liberia

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Jocelyn Kelly, Elizabeth Colantuoni, Michele Decker, Courtland
Robinson,



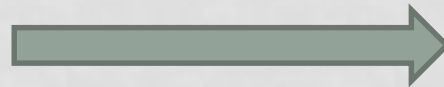
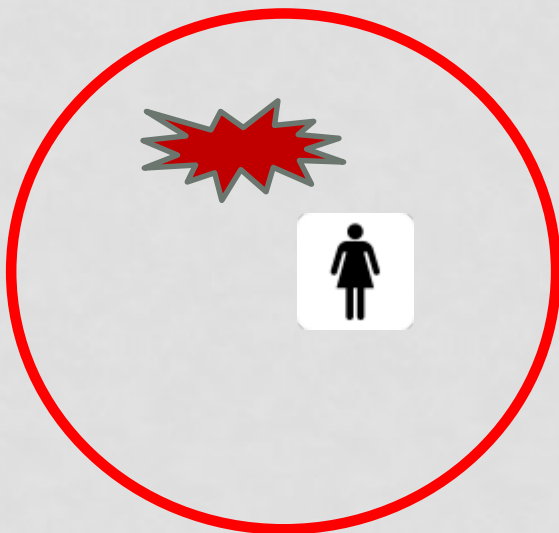
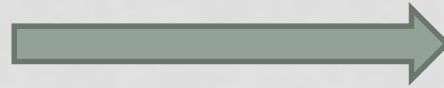
BACKGROUND

Countries affected by conflict



- Each year, violence is one of the leading causes of death for people aged 15 to 44
- Women most affected by many forms of interpersonal violence
- Roughly one third of violence-related deaths are attributed to interpersonal violence and one-fifth are attributed war.
- Yet, links between war and private violence are not fully understood

BACKGROUND



LIBERIAN CONFLICT BACKGROUND

- West African nation
- Population of 4.3 million
- 1989 rebellion sparking two successive civil wars from 1989-2003



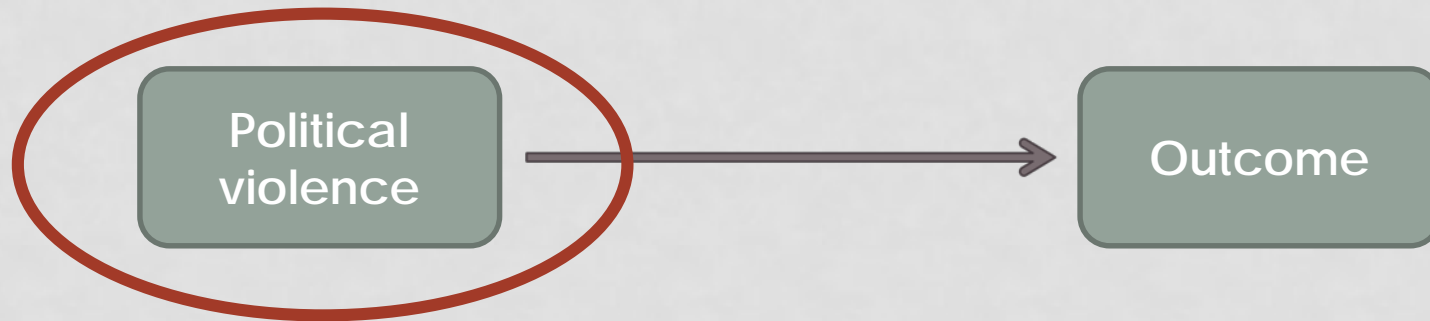
RESEARCH AIMS 1&2

1. Quantify the association between non-partner physical violence (NPPV) and district-level conflict
2. Quantify the association between intimate partner violence (IPV) and district-level conflict



RESEARCH SUB-AIM

- Conduct sensitivity analyses to determine how the characterization of conflict affects each analysis





METHODS



DATA SOURCES

Armed Conflict Location and Event (ACLED) data

District-level data

- Provides the dates and locations of all political violence events in over 50 countries
- Most comprehensive source of conflict data globally
- Provides data on how many conflict-related fatalities occur in each district in Liberia



DATA SOURCES

Demographic and Health Survey (DHS) data

Individual-level data

- Provides population-based data about health and social outcomes
- Conducted in 2007 in Liberia (five years post-conflict)

FINAL DATASET

- Merged DHS and ACLED data using a unique district identifier



- Used a multi-level modeling approach to link individual violence outcomes to district-level conflict measures
 - i indexes the district, j indexes the individual

$$\text{Logit} (Y_{ij} = 1) = \beta_0 + b_{0i} + \beta_1 I(\text{any conflict}_i) + \beta_2 X_{ij}$$

DEPENDENT VARIABLES

Past-year Non-Partner Physical Violence (NPPV)

- Women asked about experiencing physical harm (hitting, slapping) since age 15
- Perpetrator
- Past 12 months

Past-year Intimate Partner Violence (IPV)

- Measured eight specific behaviours
- Past 12 months



INDEPENDENT VARIABLES

Structural characteristics

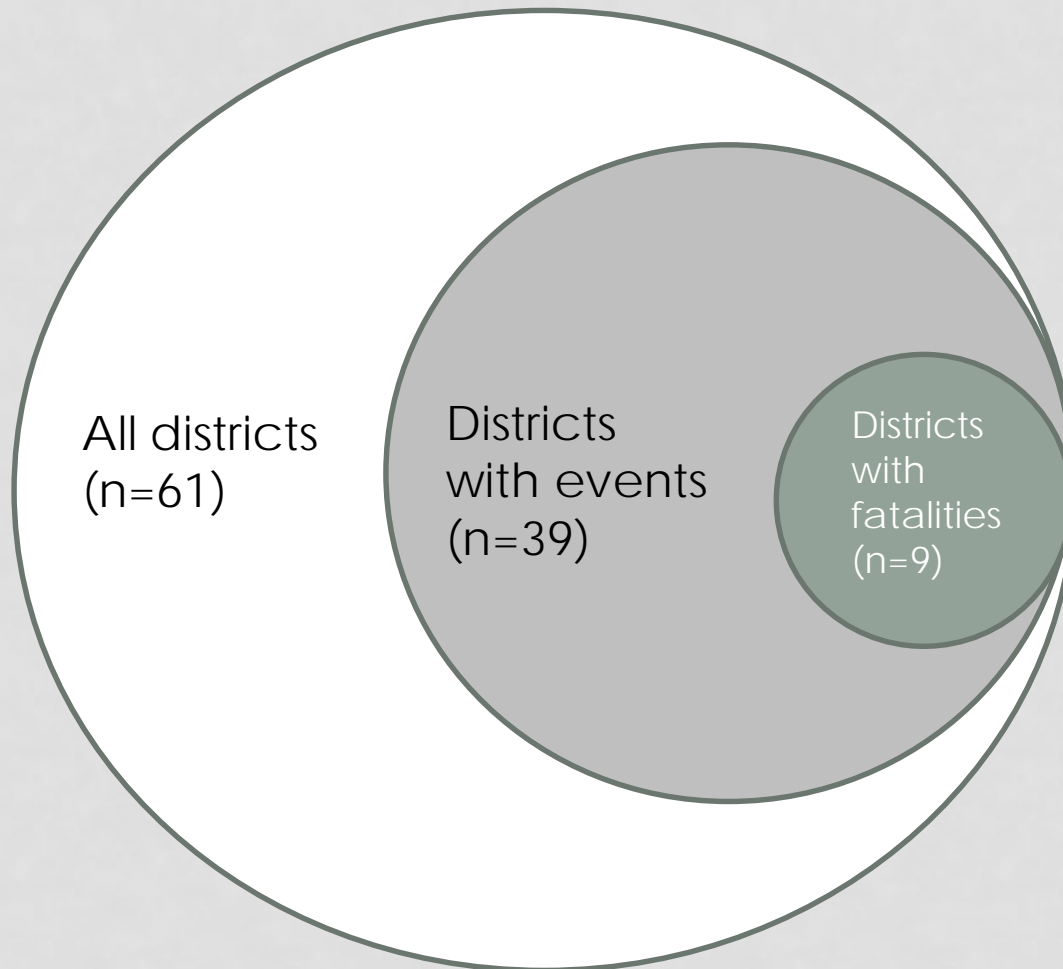
Conflict fatalities (primary predictor)



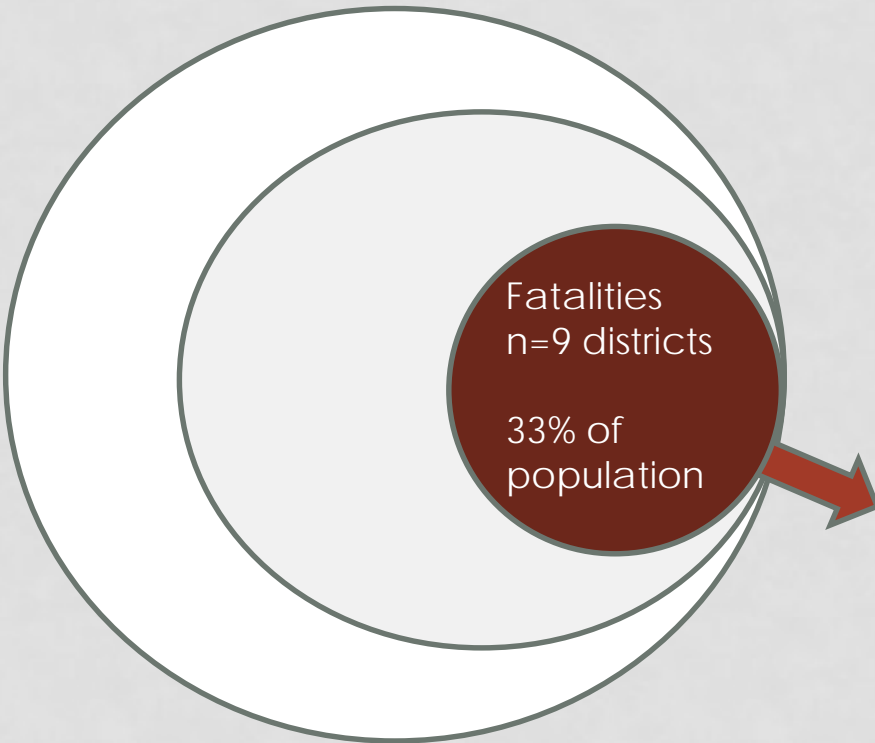
MEASURING CONFLICT

SUB AIM 1&2

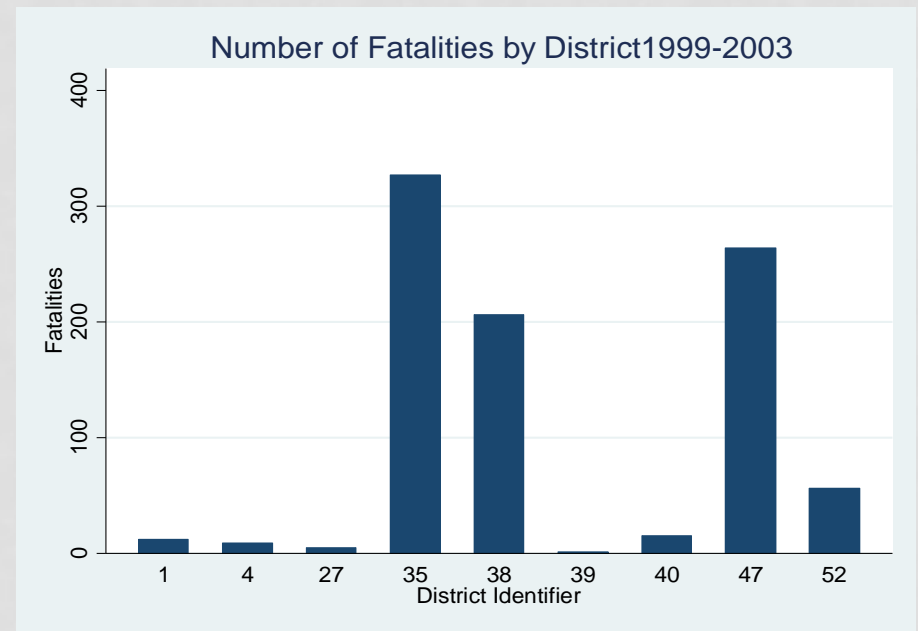
MEASURING CONFLICT



MEASURING CONFLICT



182 fatalities per district on average
(range 1-327)

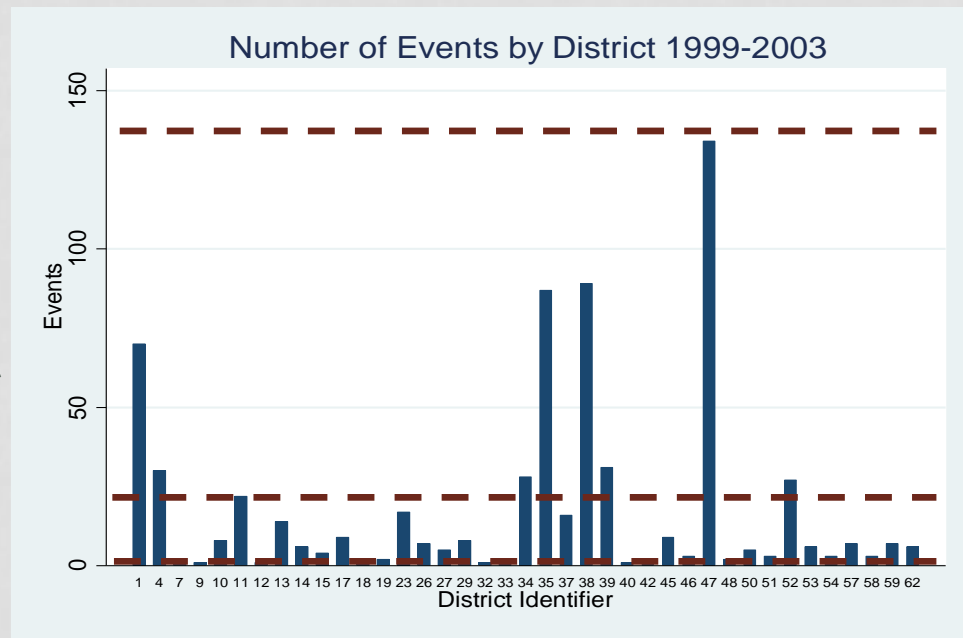


MEASURING CONFLICT

Events
n=39 districts

67% of
population

42 events per district on average
(range 1-134)



	0 events	1-15 events	15-134 events
Districts	22 districts	27 districts	12 districts
Individuals (%sample)	756 (16.9%)	2,167 (48.5%)	1,547 (34.6%)

Cumulative year measure



0 Years	1 Year	2-3 Years	4-5 Years
22 districts	17 districts	15 districts	7 districts
17.1% sample	21.8% sample	31.7% sample	29.5% sample

FINAL CONFLICT MEASURES

Fatalities	Events
<ul style="list-style-type: none">• Dichotomous*	<ul style="list-style-type: none">• Dichotomous• No-, medium-, & high events• Cumulative event years

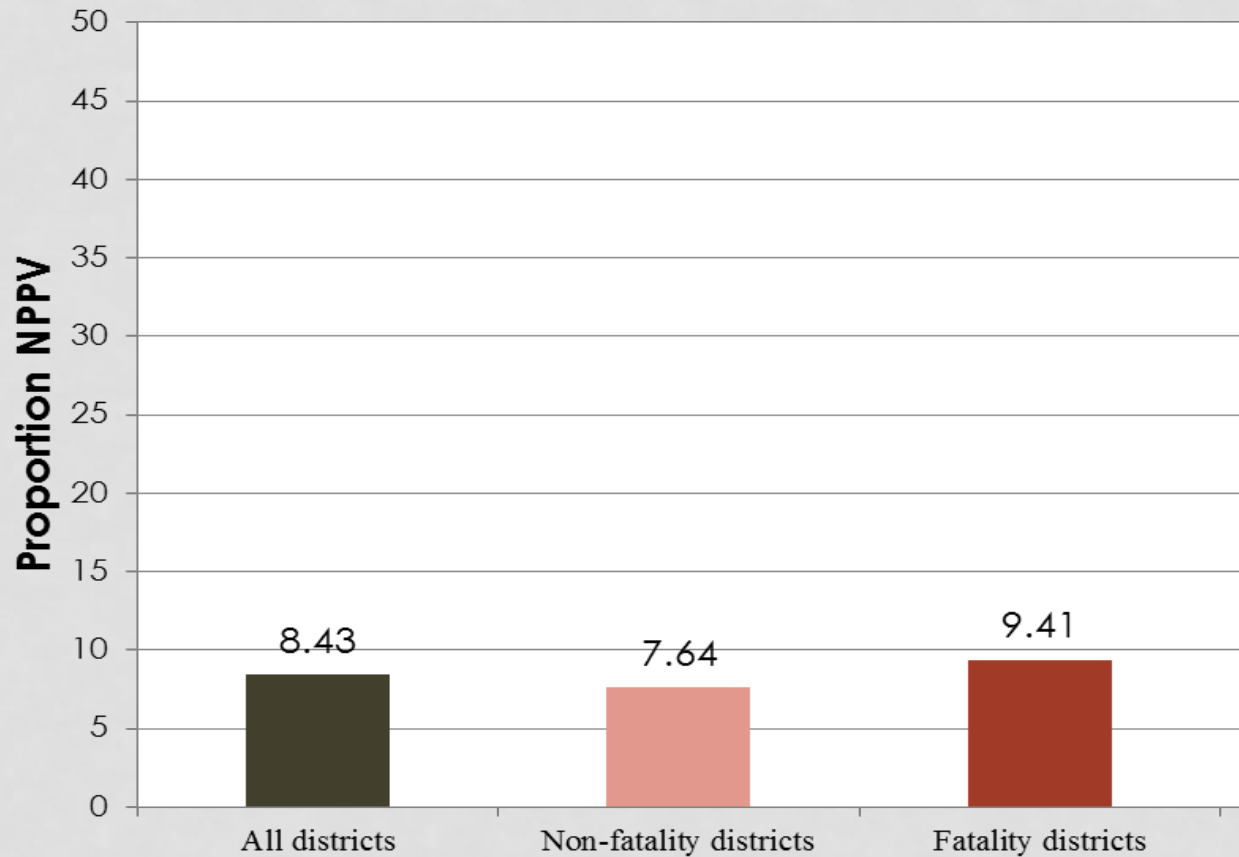


NPPV RESULTS

AIM 1

RESULTS - AIM 1

Prevalence of past-year NPPV by conflict measure



RESULTS - AIM 1

		Model 1: No Covariates
		aOR
Districts with fatalities		2.62***
Age		
No. children under 5		
Education	No education (ref)	
	Primary	
	Secondary plus	
Religion	Christian (ref)	
	Muslim	
	Other	
Civil Status	Never married (ref)	
	Married	
	Living together	
	Widow/divorced	
Wealth	Poorest (ref)	
	Poorer	
	Middle	
	Richer	
	Richest	
Employment	Didn't work	
	Worked	
Aggregate Violence Measure	None	
	Any	

RESULTS - AIM 1

Sensitivity analysis with different measures of conflict – final model results

	Dichotomous Fatalities		Dichotomous Events No events (ref) Any events		Three Categories of Events 1st tertile (ref) 2nd tertile 3rd tertile		Cumulative Event Years 0 event years (ref) 1 event year 2-3 event years 4-5 event years	
	aOR	P Value	aOR	P Value	aOR	P Value	aOR	P Value
Adjusted association between conflict and NPPV	1.43	0.197	1.39	0.126	1.2 1.52	0.384 0.065	1.31 1.18 2.93	0.267 0.521 <0.001



CONCLUSIONS - AIM 1

- Strong association in unadjusted model for dichotomous fatalities but...
- As individual-level variables were added to the model, this association attenuated and did not reach significance
- A woman living in a district with 4-5 years event-years had almost 3 times the risk of NPPV, after accounting for relevant individual level characteristics

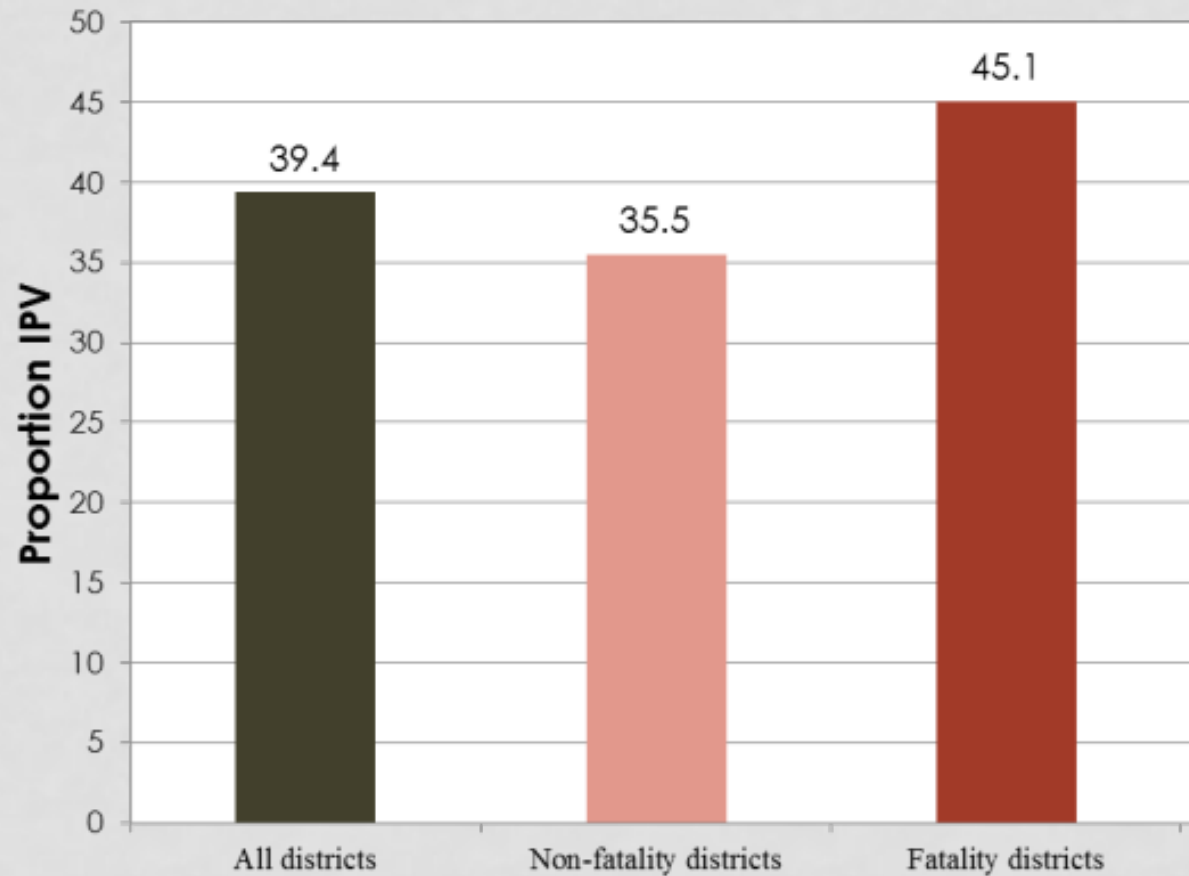


IPV RESULTS

AIM 2

RESULTS - AIM 2

Prevalence of past-year IPV by conflict measure



RESULTS - AIM 2

		Model 1: No Covariates
		aOR
Districts with fatalities		1.97***
Age		
No. children under 5		
Education	No education (ref)	
	Primary	
	Secondary & up	
Religion	Christian (ref)	
	Muslim	
	Other	
Civil Status	Married (ref)	
	Living together	
	Widow/divorced	
Partner Education	No education (ref)	
	Primary	
	Secondary & up	
Age married		
Wealth	Poorest (ref)	
	Poorer	
	Middle	
	Richer	
	Richest	
Employ-ment	Didn't work	
	Worked	
Violence Measure	No violence	
	Violence	
Partner Alcohol	None	
	Any	

RESULTS - AIM 2

Sensitivity analysis with different measures of conflict – final model results

	Dichotomous Fatalities		Dichotomous Events No events (ref) Any events		Three Categories of Events 1st tertile (ref) 2nd tertile 3rd tertile		Cumulative Event Years 0 event years (ref) 1 event year 2-3 event years 4-5 event years	
	aOR	P Value	aOR	P Value	aOR	P Value	aOR	P Value
Adjusted association between conflict and IPV	1.55	<0.001	1.17	0.334	1.28 1.03	0.178 0.876	1.31 1.20 1.88	0.144 0.335 <0.001



CONCLUSIONS - AIM 2

- A woman living in a district with any conflict-related fatalities had 50% greater odds of experiencing IPV, compared to a woman living in a no-fatality district
- A woman living in a district in the highest event-year category had 2 times greater odds of experiencing IPV, compared to a woman living in a no event-year district



CONCLUSIONS



LIMITATIONS

- Cross-sectional measure
- Secondary administrative boundary
- Hard to examine dose-response relationship
- NPPV measured less precisely than IPV
- Lack of additional data on district-level characteristics



STRENGTHS

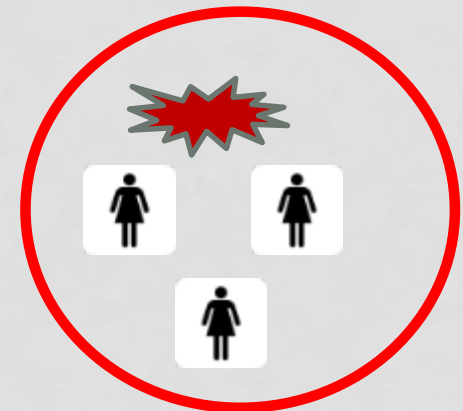
- Unique contribution to growing literature
- Combines two rigorous multi-country datasets
- First analysis of NPPV and conflict
- Shows conflict effects persist even after significant lag (5 years)

IMPLICATIONS

- Previously conflict has focused on those vulnerable individuals/groups that have been “directly” affected by conflict



- This work suggests that residing in a highly affected place may be associated with increased risk of violence





IMPLICATIONS

- One of the first efforts to quantify the spread of violence after conflict
- Findings point to opportunities for intervention
- Explicitly addressing this problem may promote a more stable and sustained peace

ADDITIONAL SLIDES



BACKGROUND

- Link between political violence *during* conflict and interpersonal violence *after* conflict
 - War linked to higher rates of intimate partner violence perpetration among men ^{1,2,3,4}
 - Women who experience abuses during conflict also report higher levels of intimate partner violence during and after conflict ^{3,4,5,6}

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INTIMATE PARTNER VIOLENCE QUESTIONS IN DHS

DHS Questions Assessing Partner Physical and Sexual Violence

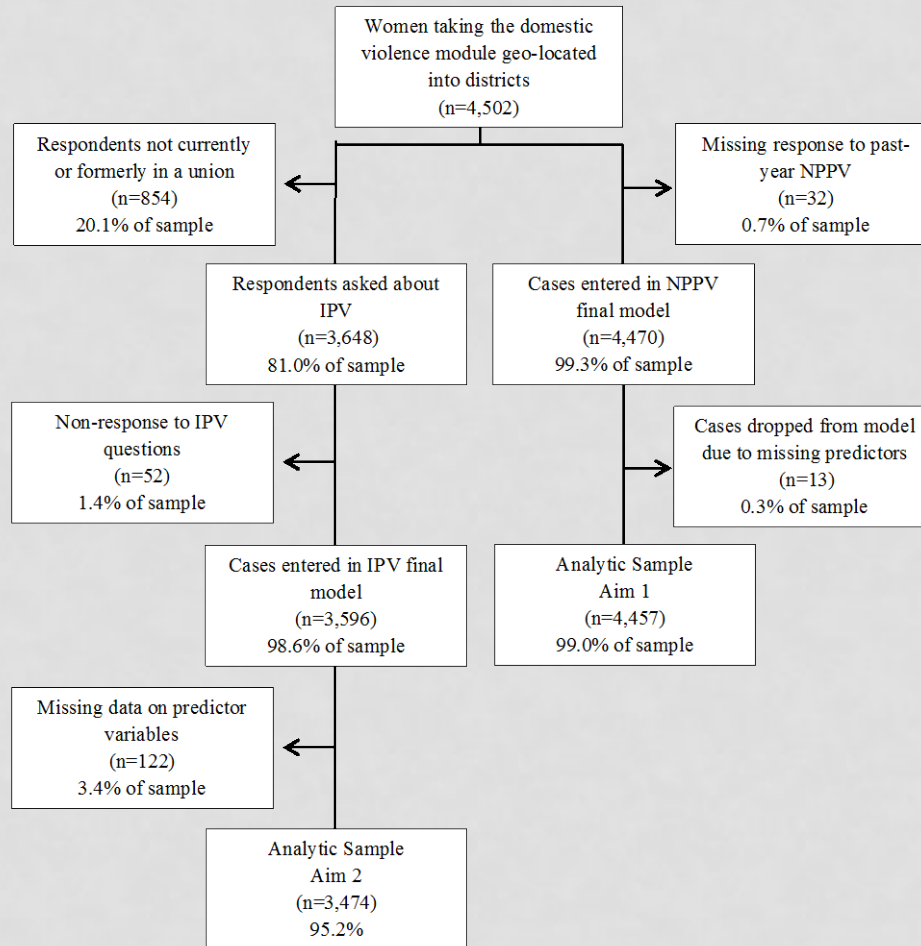
Does/Did your (last) husband/partner ever do any of the following things to you:

Partner physical violence	<ul style="list-style-type: none">a) Push you, shake you, or throw something at you?b) Slap you?c) Twist your arm or pull your hair?d) Punch you with his fist or with something that could hurt you? e) Kick you, drag you, or beat you up?f) Try to choke you or burn you on purpose?g) Threaten or attack you with a knife, gun, or other weapon?
Partner sexual violence	<ul style="list-style-type: none">h) Physically force you to have sexual intercourse with him even when you did not want to?i) Force you to do any sexual acts you did not want to?

NPPV QUESTIONS

- “From the time you were 15 years old, has anyone [other than your (current/last) partner hit,] slapped, kicked, or done anything else to hurt you physically?”
- Those respondents who answered “yes” were asked, “Who has hurt you in this way?”
- A series of possible actors are listed. Survey enumerators were asked to check all that apply
- The respondent was then asked, “In the last 12 months, how often have you been hit, slapped, kicked, or physically hurt by this/these person(s)?” Possible responses were “not at all,” “often,” or “sometimes.”

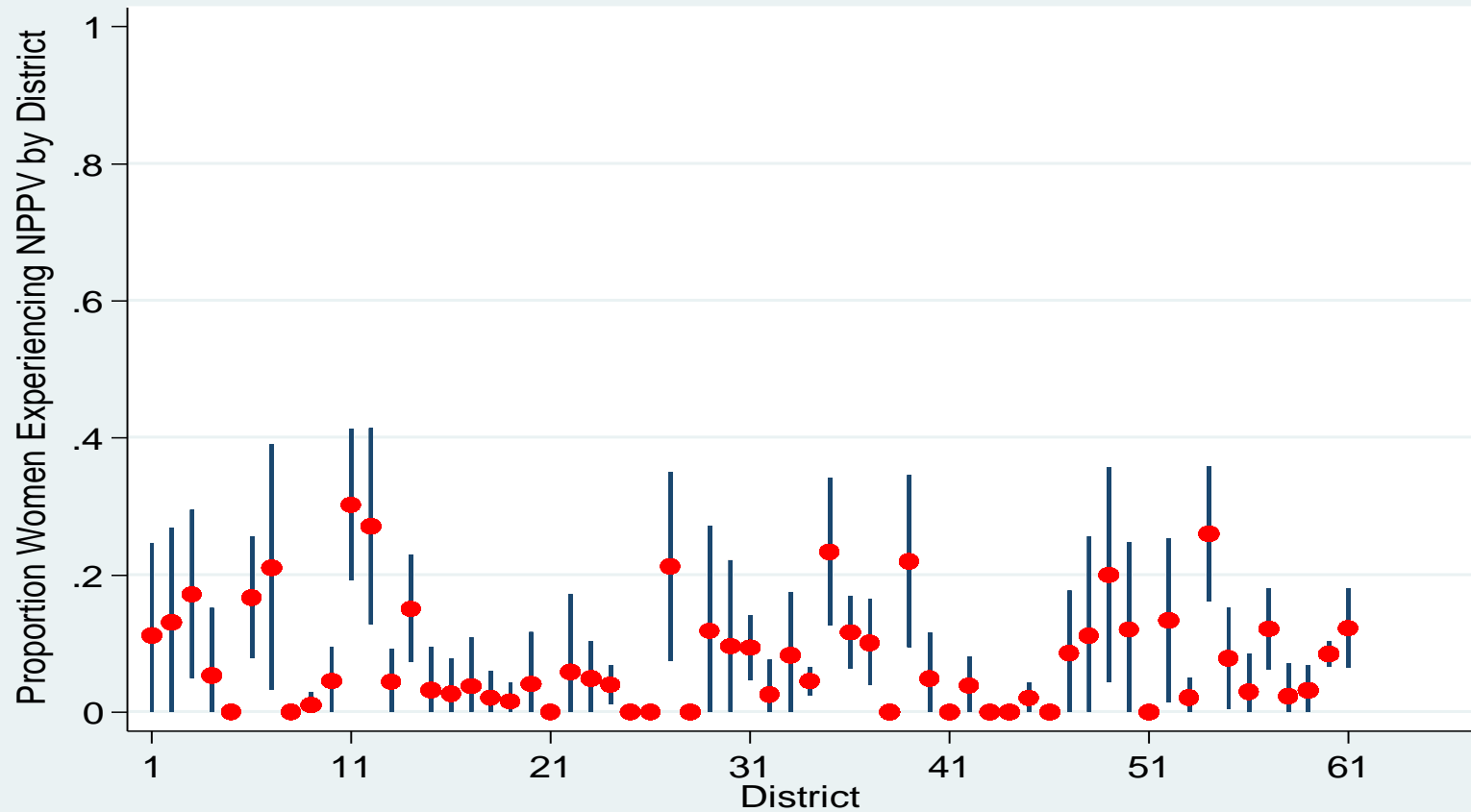
ANALYTIC SAMPLE



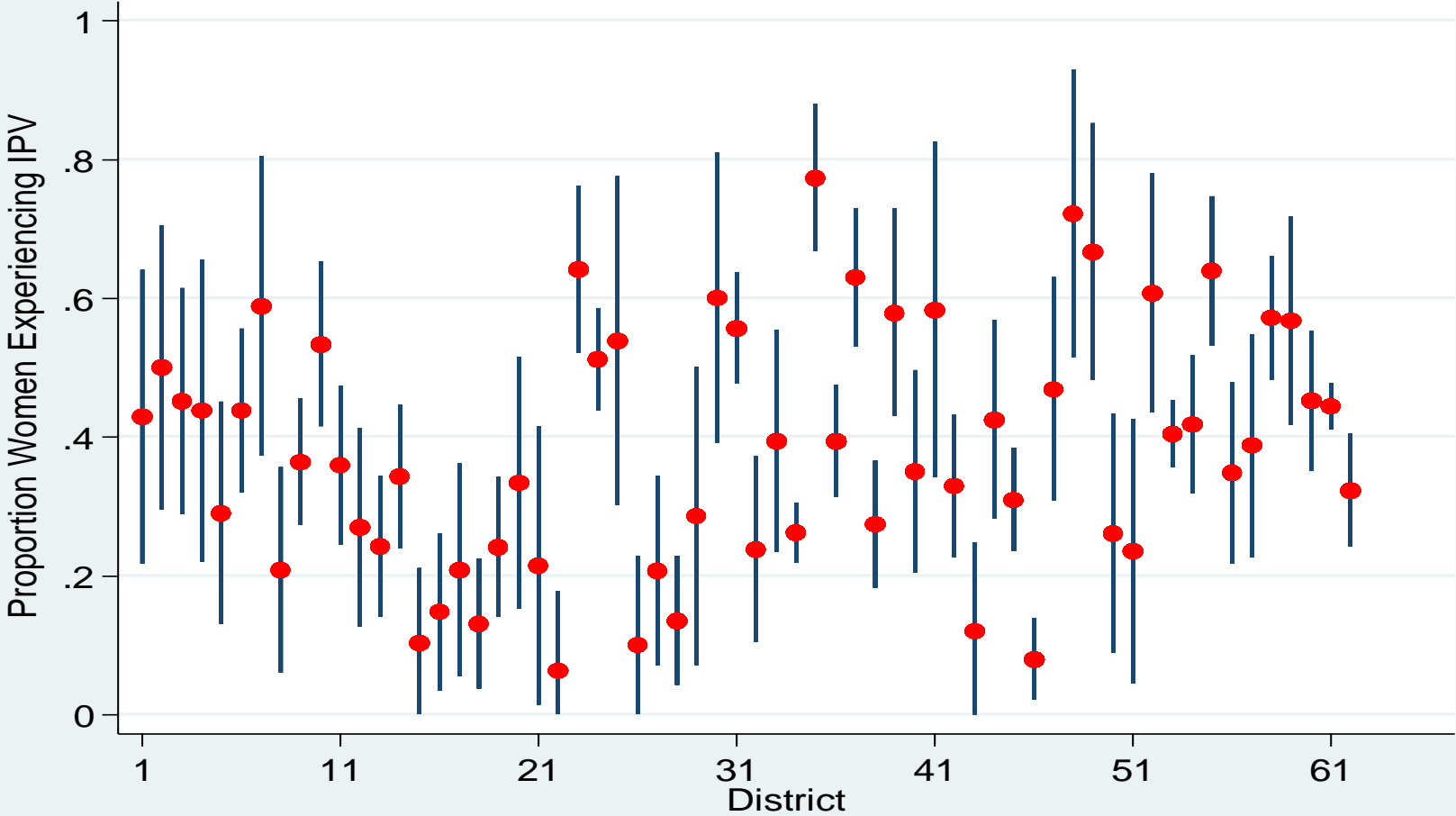
NPPV BIVARIATE ASSOCIATIONS

		Total Sample		No NPPV		NPPV		Odds Ratio	P Value
		N	(%)	N	(row %)	N	(row %)		
Conflict experience	No fatalities	2,973	66.7	2,761	92.9	212	7.1	--	--
	Fatalities	1,484	33.3	1,352	91.1	132	8.9	2.62	<0.001
Age (mean, SE)		30	9.2	30.3	9.12	26.3	8.87	0.94	<0.001
No. children under 5 (mean, SE)		1.29	1.07	1.29	1.07	1.26	1.08	1.03	0.536
Education	No education (ref)	2,092	46.9	1,962	93.8	130	6.2	--	--
	Primary	1,520	34.1	1,386	91.2	134	8.8	1.71	<0.001
	Secondary or above	845	19.0	765	90.5	80	9.5	1.56	0.007
Religion	Christian (ref)	3,802	85.3	3,505	92.2	297	7.8	--	--
	Muslim	470	10.5	434	92.3	36	7.7	0.81	0.482
	Other	185	4.2	174	94.1	11	5.9	0.73	0.234
Civil Status	Never married (ref)	843	18.9	723	85.8	120	14.2	--	--
	Married	2,061	46.2	1,955	94.9	106	5.1	0.33	<0.001
	Living together	1,155	25.9	1,063	92.0	92	8.0	0.43	<0.001
	Widow/divorced	398	8.9	372	93.5	26	6.5	0.38	<0.001
Wealth	Poorest (ref)	1,015	22.8	967	95.3	48	4.7	--	--
	Poorer	998	22.4	920	92.2	78	7.8	1.40	0.070
	Middle	928	20.8	843	90.8	85	9.2	1.60	0.030
	Richer	877	19.7	793	90.4	84	9.6	1.53	0.022
	Richest	639	14.3	590	92.3	49	7.7	1.09	0.753
Employment	Didn't work in past 12 months	1,413	31.7	1,289	91.2	124	8.8	--	--
	Worked in past 12 months	3,044	68.3	2,824	92.8	220	7.2	0.76	0.060
Aggregate Violence Measure	No violent experiences	1,254	28.1	1,195	95.3	59	4.7	--	--
	Violent experiences	3,203	71.9	2,918	91.1	285	8.9	2.01	<0.001

NPPV WITHIN VS BETWEEN VARIATION



IPV WITHIN VS BETWEEN VARIATION



MIGRATION - AIM 1

Sensitivity analysis comparing non-migrants to full population

	<u>Full Sample</u> Dichotomous Fatalities	
	aOR	P Value
Adjusted association between conflict and NPPV	1.43	0.197

MIGRATION - AIM 2

Sensitivity analysis comparing non-migrants to full population

	Full Sample Dichotomous Fatalities	
	aOR	P Value
Adjusted association between conflict and IPV	1.55	<0.001

INTRACLUSTER CORRELATION

MULTILEVEL MODEL

Multilevel Model – Dichotomous Exposure:

$$\text{Logit}(Y_{ij} = 1) = \beta_0 + b_{0i} + \beta_1 I(\text{any conflict}_i) + \beta_2 X_{ij}$$

Multilevel Model - Multiple Levels of Exposure:

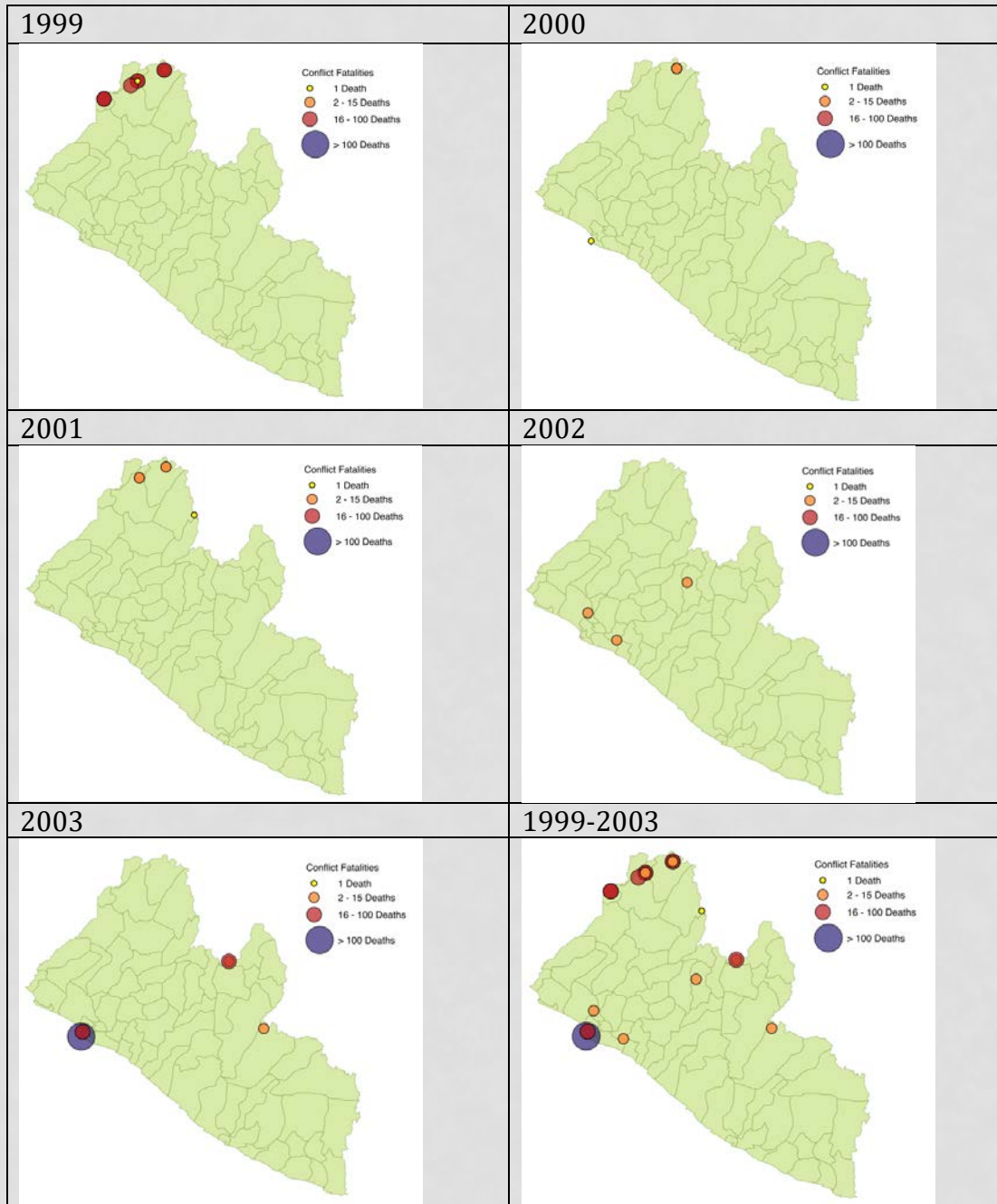
$$\text{Logit}(Y_{ij} = 1) = \beta_0 + b_{0i} + \beta_1 I(\text{mid level conflict}_i) + \beta_2 I(\text{high level conflict}_i) + \beta_3 X_{ij}$$

- i indexes the district, j indexes the individual
- Y_{ij} is the indicator for whether a woman (j) in district (i) has reported experiencing violence in the last 12 months.

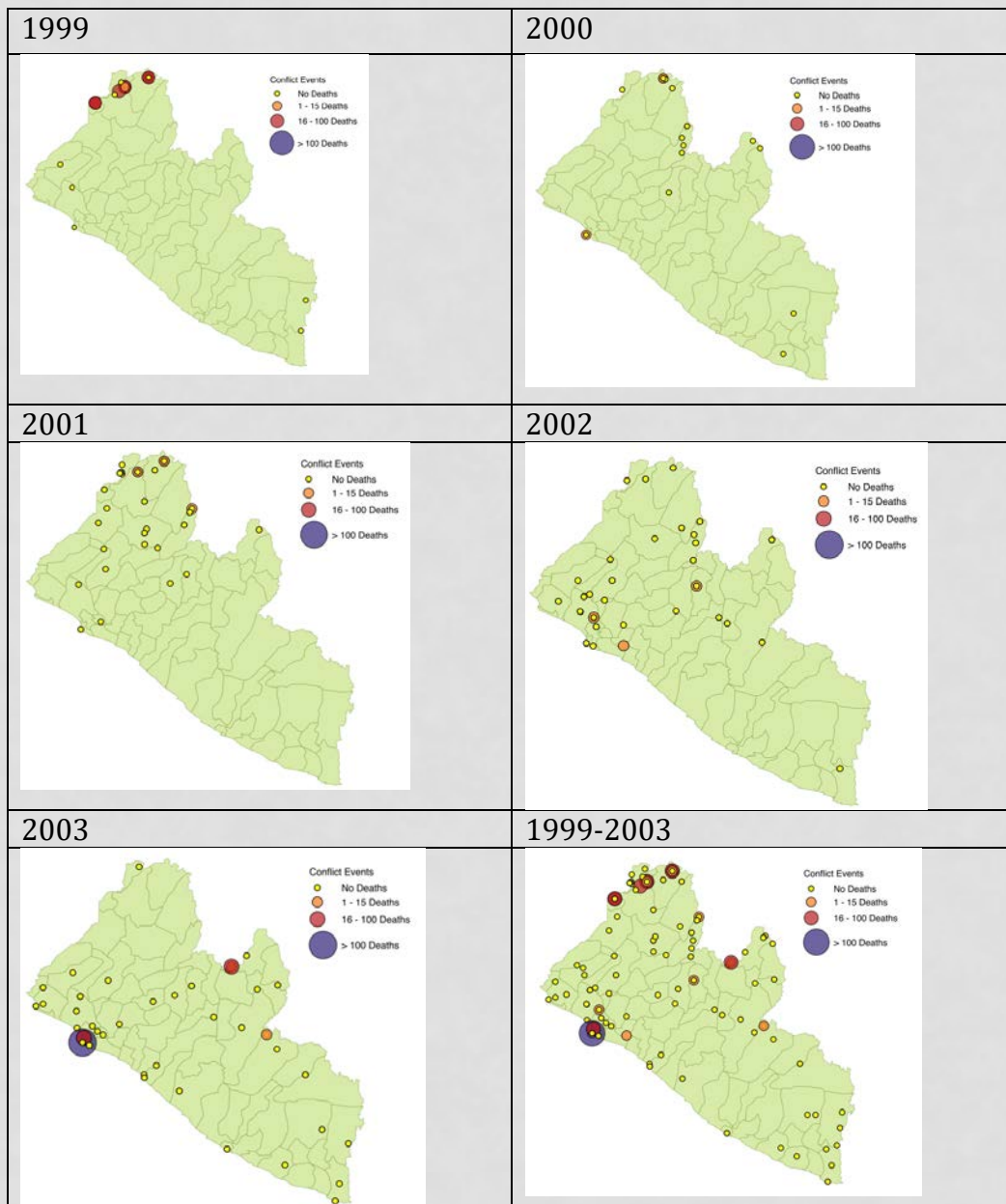
AGGREGATE VIOLENCE MEASURE

- Exposure to violence and having permissive attitudes toward violence are measured through three separate questions in the DHS.
- Respondents were asked whether their father had ever beaten their mother (yes/no response).
- Respondents were asked if they had ever been physically hurt by their father (yes/no).
- Finally, permissive attitudes towards IPV were assessed through a five-item scale.
 - Beating justified:
 - "She goes out without telling the husband"; "She neglects the children"; "She argues with husband"; "She refuses to have sex with husband"; and "She burns the food."

Conflict Fatalities in Liberia during the Second Civil War by Year



Conflict Events in Liberia during the Second Civil War by Year



RESULTS - AIM 1

		Model 1: No Covariates	Model 2: Demographic, Marriage	Model 3: Demographic, Marriage, Economic	Model 4: Demographic, Marriage, Economic, Violence
		aOR	aOR	aOR	aOR
Districts with fatalities		2.62***	1.52**	1.5	1.43
Age			0.96***	0.96***	0.96***
No. children under 5			1.03	1.02	1.03
Education	No education (ref)		--	--	--
	Primary		1.17	1.15	1.15
	Secondary plus		1.31	1.34	1.37
Religion	Christian (ref)		--	--	--
	Muslim		0.95	0.92	0.89
	Other		0.6	0.62	0.66
Civil Status	Never married (ref)		--	--	--
	Married		0.53**	0.52**	0.5**
	Living together		0.59**	0.57**	0.55**
	Widow/divorced		0.64	0.62*	0.6*
Wealth	Poorest (ref)			--	--
	Poorer			1.42	1.42
	Middle			1.5	1.52
	Richer			1.6*	1.63*
	Richest			1.13	1.17
Employment	Didn't work			--	--
	Worked			1.14	1.14
Aggregate Violence Measure	None				--
	Any				1.97***

RESULTS - AIM 1

A closer look at cumulative event years:

Is this result driven by an “accumulation” of conflict?Or by fatalities?

	<u>All Events</u>	
	Cumulative Event Years	
	0 event years (ref)	
	1 event year	
	2-3 event years	
	4-5 event years	
	aOR	P Value
Adjusted association between conflict and NPPV	1.31	0.267
	1.18	0.521
	2.93	<0.001

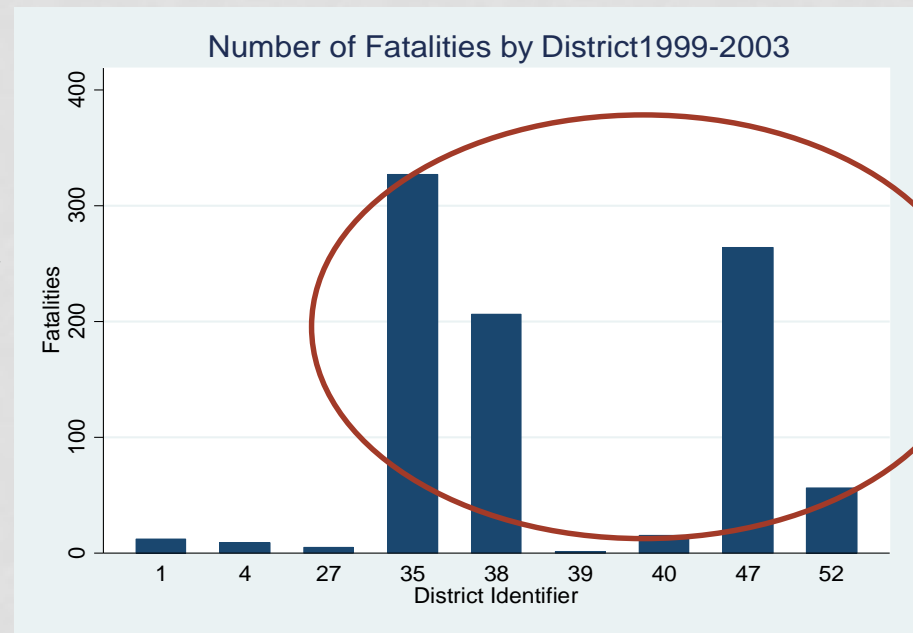
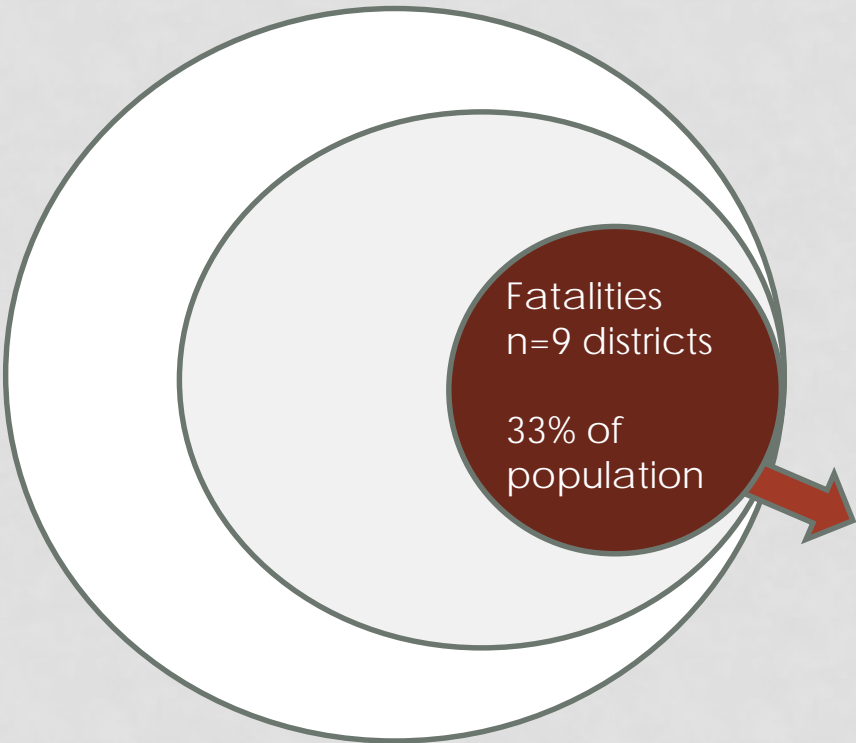
RESULTS - AIM 2

A closer look at cumulative event years:

Is this result driven by an “accumulation” of conflict?Or by fatalities?

	<u>All Events</u> Cumulative Event Years	
	aOR	P Value
Adjusted association between conflict and IPV	1.31 1.20 1.88	0.144 0.335 <0.001

FATALITY/EVENT YEAR OVERLAP



Perpetrators of ever-violence

	N	%
Mother or stepmother	526	11.68
Father or stepfather	383	8.51
Sister or brother	181	4.02
Other relative	138	3.07
Other in-law	6	0.13
Mother in-law	5	0.11
Daughter or son	4	0.09
Father in-law	4	0.09
Former boyfriend	149	3.31
Former husband/partner	142	3.15
Current boyfriend	100	2.22
Teacher	62	1.38
Employer/work colleague	5	0.11
Other	49	1.09