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POLITICAL VIOLENCE IN KWILU AND CHILDREN

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ABSTRACT

This paper investigates the extent to which political violence influences the health of young children in Kwilu, DR Congo. We identify the negative effects of exposure to political violence on child health using regression analysis. Specifically, experiencing political violence makes children weigh less for their age and less for their height by 0.508 and 0.359 standard deviations, respectively. Our study calls for quick and effective actions to minimize the negative consequences of political violence.

KEYWORDS: ***Violence, Children, Kwilu***

1. INTRODUCTION

Political violence is seen as an obstacle to our progress toward sustainable development and a threat to global peace, and reduce people's quality of life in many ways, such as increasing sicknesses, reducing earnings, and deteriorating educational outcomes (Huong et al., 2021; Le and Nguyen 2020a; Hang et al., 2021). This study examines the extent to which political violence affects the health of children in Kwilu, DR Congo. We are interested in this city since it has been plagued, for many decades, by political violence. Thus, quantifying the impacts of violent exposure on child health might add to our understanding of the violence-human health nexus, allowing governments to implement necessary solutions quickly.

To quantify the impacts of political violence exposure on child health, we utilize the data from the DR Congo Demographic and Health Survey. We present compelling evidence that exposure to political violence has negative influences on the health of DR Congolese children. Particularly, experiencing political violence makes children weigh less for their age and less for their height by 0.508 and 0.359 standard deviations, respectively.

Our work is related to studies looking into children's vulnerability to extreme occurrences. For example, severe rainfall and temperature may raise the risk of undernutrition and illnesses in young children (Khoi et al., 2021; Le and Nguyen, 2021a, 2021b, 2021c). Food shortage and starvation have also been shown to significantly impair children's nutritional status and survival (Le, 2020). Various interventions on health literacy, nutrition, and land reforms have also been documented to be beneficial to child health (Le, 2021a; Nguyen, 2020; Trang et al., 2021; Le and Nguyen, 2019, 2020b, 2021d). Closest to our work are the studies considering political violence as an extreme event affecting children's health. Particularly, several studies have documented the negative relationship between war and early childhood health (Le and Nguyen, 2020c; Le, 2021b).

2. DATA

The data on child health are taken from the DR Congo Demographic and Health Survey (DHS). This is a rich source of information on children under the age of five. Two anthropometric measurements are utilized to measure child health, namely weight-for-age and weight-for-height z-scores. The child is defined as exposed to political violence if there existed political violence in the child's district. Our main explanatory variable, *Exposed to Political Violence (EPV)*, is an indicator equal to one if the child's district experienced violence, and zero otherwise.

Our estimation sample consists of 907 DR Congolese children in Kwilu. The descriptive statistics are reported in Table 1. According to Panel A, the z-scores of weight-for-age and weight-for-height take the average of -0.431 and 0.153 standard deviations. According to Panel B, around 22.1% of children were exposed to political violence. The mothers' current age

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is 27.48 and their age at birth is 26.02 on average. Besides, the mothers, on average, have 10.34 years of schooling. Around 64% of their families are led by a male. Approximately 47.9% of children are male. Children on average are 28.57 months old. The mean birth order is 2.364. The share of plural birth is 1.2%.

Table 1: Summary Statistics

	Mean (1)	SD (2)	N (3)
Panel A: Dependent Variables			
Weight-for-age Z-score	-0.431	1.239	907
Weight-for-height Z-score	0.153	1.218	907
Panel B: Independent Variables			
Exposed to Political Violence	0.221	0.422	907
Mother's Age	27.48	6.144	907
Mother's Age at Birth	26.02	5.883	907
Mother's Years of Education	10.34	2.543	907
Male Household Head	0.640	0.482	907
Male Child	0.479	0.501	907
Child's Age in Months	28.57	17.32	907
Child's Birth Order	2.364	1.516	907
Being a Plural Birth	0.012	0.109	907

3. EMPIRICAL METHODOLOGY

We employ the following regression model to assess the impact of early childhood exposure to political violence on health outcomes of DR Congolese children in Kwilu:

$$Y_{irbt} = \beta_0 + \beta_1 EPV_{rbt} + \lambda_r + \gamma_b + \delta_t + X'_{irbt}\Omega + \epsilon_{irbt}$$

The subscripts stand for and stand for the child *i*, residential district *r*, birth month-year *b*, and survey month-year *t*, respectively. The variable Y_{irbt} is the dependent variable of interest, such as height-for-age and weight-for-age z-scores. The main dependent variable is EPV_{rbt}, which is an indicator equal to one if the child experienced political violence before the survey date and after being born, and zero otherwise.

We also incorporate into our regression a set of variables $\{\lambda_r, \gamma_b, \delta_t\}$ indicating residential district, birth month-year, as well as survey month-year fixed effects, respectively. In addition, the vector X'_{irbt} is included to control for child and mother attributes, such as: (i) mother's age, squared-age, age at birth, squared-age at birth, educational years, as well as male household head indicator, and (ii) child's age in months, squared-age in months, gender, birth order, and plural birth indicator. Finally, ϵ_{irbt} is the error term. The standard errors throughout the analysis are clustered at the residential cluster level. The coefficient of interest is β_1 which quantifies the impacts of political violence on child health.

4. RESULTS

As reported in Column 1, we find that children exposed to political violence have their weight-for-age lower by 0.181 standard deviations and weight-for-height lower by 0.113 standard deviations. However, these estimates simply represent the correlation between child health and exposure to political violence without adequate controls that could jointly influence exposure status and child health. Children born later, for example, have a lower chance to be exposed to political violence and a higher chance to enjoy quality health services at the same time.

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Table 2: Political Violence and Child Health - Main Results

	(1)	(2)	(3)	(4)
Panel A: Weight-for-age				
Exposed to Political Violence	-0.181**	-0.659***	-0.609***	-0.508***
	(0.067)	(0.155)	(0.168)	(0.152)
Observations	907	907	907	907
Panel B: Weight-for-height				
Exposed to Political Violence	-0.113*	-0.539**	-0.463**	-0.359***
	(0.061)	(0.171)	(0.197)	(0.108)
Observations	907	907	907	907

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

In Column 2, we add birth month-year, survey month-year, and residential cluster fixed effects to control for spatial and temporal heterogeneities such as the one mentioned above. Then, we proceed to account for the mother's attributes that could bias our results in Column 3. Highly educated mothers, for example, tend to have healthier children and are less likely to be exposed to extreme events simultaneously (Nguyen, 2018; Le and Nguyen, 2020d, 2021e, 2021f). Column 4 reports the estimates from our most extensive specification where we account for the child's characteristics in addition to the fixed effects and mother attributes. We find that experiencing political violence makes children weigh less for their age and less for their height by 0.508 and 0.359 standard deviations, respectively.

5. CONCLUSION

Collectively, we have found that exposure to political violence adversely affects child health in the context of Kwilu, DR Congo. Specifically, experiencing political violence makes children weigh less for their age and less for their height by 0.508 and 0.359 standard deviations, respectively. Political violence is seen as an obstacle to our progress toward sustainable development and a threat to global peace, and reduce people's quality of life in many ways, such as increasing sicknesses, reducing earnings, and deteriorating educational outcomes (Huong et al., 2021; Le and Nguyen 2020a; Hang et al., 2021). Thus, quantifying the impacts of violent exposure on child health might add to our understanding of the violence-human health nexus, allowing governments to implement necessary solutions quickly.

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