



The Influence Of Education On Birth Weight And Incidence Of Low Birth Weight In DR Congo

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Abstract: Within the context of DR Congo, this study examine whether more educated mothers give birth to healthier offspring (N=30,203). We observed that Congolese mothers with more education give birth to healthier offspring compared to those with less education. Quantitatively, one more educational year is associated with 5.8869 grams increase in birth weight and 0.41 percentage points decrease in incident of low birth weight.

Keywords: Education; Birth Weight

Introduction

Malnutrition is responsible for more than half of all fatalities in children under the age of five. Moreover, early-life health problems can have long-term consequences, such as cognitive impairment, increased vulnerability to chronic illnesses, reduced educational achievement, and decreased productivity. Given these exorbitant costs, focus has shifted to addressing childhood health problems, with education seen as a potential answer.

Within the context of DR Congo, this study examine whether more educated mothers give birth to healthier offspring (N=30,203). Other studies have looked at the more obvious impacts of education, such as incomes, occupations, and production, but this one adds to the body of knowledge by looking at the less obvious effects, notably on child health. Focusing on DR Congo, our findings add to the expanding body of knowledge about the intergenerational link between health and education.

We observed that Congolese mothers with more education give birth to healthier offspring compared to those with less education. Quantitatively, one more educational year is associated with 5.8869 grams increase in birth weight and 0.41 percentage points decrease in incident of low birth weight.

Data

We examine whether more educated mothers give birth to healthier offspring using data from the DR Congo Demographic and Health Surveys (CDHS). The CDHS provides comprehensive demographic and health data on children aged 0 to 4. The CDHS also includes a number of parental characteristics. The primary explanatory variable is the number of educational years the respondents completed (Education).

Table 1: Summary Statistics

	Mean (1)	SD (2)	N (3)
Birth Weight	3273.4	644.69	28953
Log Birth Weight	1.163	0.228	28953
Low Birth Weight	0.113	0.316	28953
Education	7.667	4.503	30167
Age	26.756	6.216	30203
Number of Offspring	2.823	1.736	30203
Living in Rural Areas	0.456	0.498	30203
Currently Married	0.976	0.152	30202
Offspring Age in Month	29.327	17.156	30203
Offspring Being Male	0.512	0.500	30203
Offspring Being Plural Birth	0.011	0.102	30203

Table 1 shows the statistical breakdown of the variables in this study. About 30,203 births are included in our sample. Offspring from DR Congo had an average birth weight of 3273.4 grams, a log birth weight of 1.163, and 11.3 percent of cases had low birth weight. In DR Congo, respondents spend an average of 7.667 years in school. The respondents' average age is 26.756. The average number of children per respondent is 2.823. Rural regions account for 45.6 percent of the population, with 97.6 percent of married people. The average age of the offspring is 29.327 months. Males account for 51.2 percent of all children, while multiple births account for 1.1 percent.

Empirical Design

We build the following regression model to examine whether more educated mothers give birth to healthier offspring,

where the subscripts j , i , s , and t refer respectively to offspring, individual, residential cluster, and survey date. The dependent stands for offspring birth weight, log birth weight, and low birth weight height.

The main explanatory, X_{it} , is the number of educational years the respondents completed. Next, the vector Z_{it} includes individual age, squared-age, number of offspring, whether the individual is currently married, whether the individual lives in rural areas, offspring age in month, squared-age in month, whether the offspring is male, whether the offspring is a plural birth, birth date fixed effects, residential cluster fixed effects and survey time fixed effects. ϵ_{it} is the error term.

The key coefficient is β_1 which is the effects of more educated mothers on birth outcomes. In other words, β_1 reflects the difference in birth outcome of women living in the same area but with different levels of education.

Results

Birth Weight - The estimated relationship between mother education and birth weight are in Table 2. Column 1 displays the estimated relationship between mother education and birth weight where only the main explanatory is controlled for. We find that one more educational year is associated with 4.6921 grams increase in birth weight.

The estimate only merely represent the connection between mother education and birth weight, while key elements that might impact both education and birth weight are not taken into consideration. For example, individuals with advantage backgrounds tend to have better health and education simultaneously. As a result, from Columns 2 to 3, we gradually add the collection of attributes and spatial-temporal fixed effects. Then, according to the most comprehensive specification (Column 3), we find that one more educational year is associated with 5.8869 grams increase in birth weight.

Table 2: Education and Birth Weight

	(1)	(2)	(3)
Education	4.6921*** (0.8531)	4.2770*** (1.0248)	5.8869*** (1.2306)
Observations	28922	28921	28770
Cluster Fixed Effects	.	.	X
All Characteristics	.	X	X

Log Birth Weight - The estimated relationship between mother education and log birth weight are in Table 3. Column 1 displays the estimated relationship between mother education and log birth weight where only the main explanatory is controlled for. We find that one more educational year is associated with 0.22% increase in birth weight.

The estimate only merely represent the connection between mother education and birth weight. As a result, from Columns 2 to 3, we gradually add the collection of attributes and spatial-temporal fixed effects. Then, according to the most comprehensive specification (Column 3), we find that one more educational year is associated with 0.26% increase in birth weight.

Table 3: Education and Log Birth Weight

	(1)	(2)	(3)
Education	0.0022*** (0.0003)	0.0020*** (0.0004)	0.0026*** (0.0004)
Observations	28922	28921	28770
Cluster Fixed Effects	.	.	X
All Characteristics	.	X	X

Low Birth Weight - The estimated relationship between mother education and low birth weight are in Table 4. Column 1 displays the estimated relationship between mother education and low birth weight where only the main explanatory is controlled for. We find that one more educational year is associated with 0.39 percentage point increase in the incident of low birth weight.

The estimate only merely represent the connection between mother education and birth weight. As a result, from Columns 2 to 3, we gradually add the collection of

attributes and spatial-temporal fixed effects. Then, according to the most comprehensive specification (Column 3), we find that one more educational year is associated with 0.41 percentage point increase in the incident of low birth weight.

Table 4: Education and Low Birth Weight

	(1)	(2)	(3)
Education	-0.0039*** (0.0004)	-0.0040*** (0.0005)	-0.0041*** (0.0006)
Observations	28922	28921	28770
Cluster Fixed Effects	.	.	X
All Characteristics	.	X	X

Conclusion

Within the context of DR Congo, this study examine whether more educated mothers give birth to healthier offspring (N=30,203). Other studies have looked at the more obvious impacts of education, such as incomes, occupations, and production, but this one adds to the body of knowledge by looking at the less obvious effects, notably on child health. Focusing on DR Congo, our findings add to the expanding body of knowledge about the intergenerational link between health and education.

We observed that Congolese mothers with more education give birth to healthier offspring compared to those with less education. Quantitatively, one more educational year is associated with 5.8869 grams increase in birth weight and 0.41 percentage points decrease in incident of low birth weight.

Our findings are related to studies that investigate the influence of a number of factors on one's health. For example, policy responses to illnesses have been demonstrated to have a significant influence on health. Heavy rain and heat can aggravate sickness. Political violence and food scarcity have all been connected to low survival rates. Various literacy, land reform, and nutrition programs have also been shown to enhance health outcomes ([World Health Organization, 2004, 2009, 2013, 2019](#)).

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