

# Do Haitian Mothers with a Higher Educational Level Have Better Birth Outcomes?

Hang Nguyen<sup>1st</sup>, Kien Le<sup>2nd</sup> & My Nguyen<sup>3rd</sup>

<sup>1st</sup> *National Economics University*

<sup>2nd</sup> *Ho Chi Minh City Open University*

<sup>3rd</sup> *Ho Chi Minh City Open University*

Received: 09<sup>th</sup> March 2021

Revised: 15<sup>th</sup> June 2021

Accepted: 26<sup>th</sup> June 2021

---

**Abstract:** The purpose of this study is to see if Haitian mothers with greater levels of education produce healthier infants (N=20,308). According to the findings, Haitian mothers with a higher educational level had healthier infants than Haitian mothers with a lower educational level. In terms of statistics, one additional education year in Haiti is linked to a 13.6053 gram rise in Haitian birth weight and a 0.38 percentage point reduction in Haitian low birth weight risk.

**Keywords :** Education; Haiti; Birth Weight

---

## Introduction

Half of fatalities of Haitian children are caused by malnutrition in Haiti. Childhood malnutrition has long-term effects on Haitians, such as cognitive impairment, increased vulnerability to chronic illnesses, reduced educational attainment, and decreased productivity. Thus, the attention of policy makers in Haiti has shifted to addressing Haitian children health concerns, with education viewed as a viable solution.

The purpose of this study is to see if Haitian mothers with greater levels of education produce healthier infants (N=20,308). Other research has focused on the more obvious outcomes of education, such as incomes, vocations, and production, but this one adds to the body of knowledge by concentrating on less visible outcomes, such as infant health. Focusing on Haiti, our findings add to the increasing body of knowledge about the health-education link across generations in Haiti.

According to our findings, Haitian mothers with a higher educational level had healthier infants than Haitian mothers with a lower educational level. In terms of statistics, one additional education

## Do Haitian Mothers with a Higher Educational Level Have Better Birth Outcomes?

year in Haiti is linked to a 13.6053 gram rise in Haitian birth weight and a 0.38 percentage point reduction in Haitian low birth weight risk.

### Data

Using data from the Haiti Demographic and Health Surveys (HTI-DHS), we investigate whether better educated Haitian mothers give birth to healthier Haitian children. The HTI-DHS collects detailed information on Haitian children aged 0 to 4. A number of Haitian parental traits are also included in the HTI-DHS. The number of schooling years completed by the Haitian respondents is the key explanatory variable (*Education*).

Table 1: Haitian Summary Statistics

	Mean	SD	N
	(1)	(2)	(3)
Haitian Birth Weight	3430.9	1264.6	3917
Haitian Log Birth Weight	8.071	0.400	3917
Haitian Low Birth Weight	0.168	0.374	3917
Haitian Education	3.881	4.019	20297
Haitian Age	30.153	7.228	20308
Haitian Number of Offspring	3.422	2.205	20308
Haitian Living in Rural Areas	0.695	0.460	20308
Haitian Currently Married	0.969	0.173	20308
Haitian Offspring Age in Month	28.545	17.296	20308
Haitian Offspring Being Male	0.503	0.500	20308
Haitian Plural Birth	0.011	0.106	20308

The statistical breakdown of the variables in this Haitian investigation is shown in Table 1. Our sample includes around 20,308 Haitian births. Haitian offspring had an average birth weight of 3430.9grams, a log birth weight of 8.071, and a low birth weight rate of 16.8%. The average length of time spent in school in Haiti is 3.881years. The average age of Haitian responders is 30.153. The average number of children per Haitian respondent is 3.422. The Haitian population lives in rural areas is 69.5%, with 96.9% of married Haitian. The Haitian offspring have an average age of 28.545 months. Males make up 50.3 percent of all Haitian children. Multiple births make up 1.1% of all Haitian births.

### Empirical Design

To see whether more educated Haitian women had healthier Haitian children, we estimate the following regression,

$$Y_{jist} = \beta_0 + \beta_1 Education_{jist} + X'_{jist} \Omega + \epsilon_{jist}$$

where the subscripts  $j$ ,  $i$ ,  $s$ , and  $t$  refer respectively to Haitian offspring, women, cluster, and survey date in Haiti.  $Y_{jist}$  stands for Haitian birth weight, Haitian birth weight in log, and Haitian risk of low birth weight.

$Education_{jist}$  is the number of educational years Haitian respondents completed.  $X'_{jist}$  includes Haitian number of offspring, age, squared-age, whether Haitian lives in rural areas, whether Haitian is currently married, whether Haitian offspring is a plural birth, whether Haitian offspring is male, Haitian offspring age in month, squared-age in month, Haitian birth date fixed effects, Haitian residential cluster fixed effects and Haitian survey time fixed effects.  $\epsilon_{jist}$  is the error term.

The coefficient  $\beta_1$  is the effects of more educated Haitian mothers on birth outcomes. In other words,  $\beta_1$  reflects the difference in birth outcome of Haitian women living in the same area but with different levels of education.

### Results

**Birth Weight** - The relationship between Haitian mother education and birth weight in Haiti are in Table 2. Column 1, where only Haitian mother education is controlled for, displays the relationship between Haitian mother education and birth weight in Haiti. We find that one extra school year in Haiti is associated with a -22.5565 gram increase in Haitian birth weight.

The estimate only represent the connection between Haitian mother education and birth weight in Haiti, while key elements in Haiti are not taken into consideration. For example, Haitian with advantage backgrounds may have better access to Haitian healthcare system and education simultaneously. As a result, from Columns 2 to 3, we add the collection of Haitian attributes and Haitian spatial-temporal fixed effects. Then, according to Column 3, we find that one additional school year in Haiti is linked to a 13.6053 gram gain in birth weight.

Table 2: Haitian Birth Weight

	(1)	(2)	(3)
Haitian Education	-22.5565*** (4.5283)	-13.8612*** (5.4004)	13.6053** (6.8360)
Observations	3917	3917	3577
Cluster FE	.	.	X
Characteristics	.	X	X

Do Haitian Mothers with a Higher Educational Level Have Better Birth Outcomes?

**Log Birth Weight** - The relationship between Haitian mother education and log birth weight in Haiti are in Table 3. Column 1, where only Haitian mother education is controlled for, displays the relationship between Haitian mother education and log birth weight in Haiti. We find that one extra school year in Haiti is associated with a -0.42% increase in Haitian birth weight.

The estimate only represent the connection between Haitian mother education and birth weight in Haiti, while key elements in Haiti are not taken into consideration. As a result, from Columns 2 to 3, we add the collection of Haitian attributes and Haitian spatial-temporal fixed effects. Then, according to Column 3, we find that one more educational year of Haitian mother is associated with 0.53% gain in birth weight.

Table 3: Haitian Log Birth Weight

	(1)	(2)	(3)
Haitian Education	-0.0042*** (0.0014)	-0.0007 (0.0017)	0.0053** (0.0023)
Observations	3917	3917	3577
Cluster FE	.	.	X
Characteristics	.	X	X

**Low Birth Weight** - The relationship between Haitian mother education and low birth weight in Haiti are in Table 4. Column 1, where only Haitian mother education is controlled for, displays the relationship between Haitian mother education and low birth weight in Haiti. We find that one more educational year of Haitian mother is associated with 0.11 percentage point reduction in low birth weight.

The estimate only represent the connection between Haitian mother education and birth weight in Haiti, while key elements in Haiti are not taken into consideration. As a result, from Columns 2 to 3, we add the collection of Haitian attributes and Haitian spatial-temporal fixed effects. Then, according to Column 3, we find that one more educational year of Haitian mother is associated with 0.38 percentage point reduction in low birth weight.

Table 4: Haitian Low Birth Weight

	(1)	(2)	(3)
Haitian Education	-0.0011 (0.0013)	-0.0034** (0.0016)	-0.0038* (0.0021)
Observations	3917	3917	3577

Cluster FE	.	.	X
Characteristics	.	X	X

**Conclusion**

The purpose of this study is to see if Haitian mothers with greater levels of education produce healthier infants (N=20,308). Other research has focused on the more obvious outcomes of education, such as incomes, vocations, and production, but this one adds to the body of knowledge by concentrating on less visible outcomes, such as infant health. Focusing on Haiti, our findings add to the increasing body of knowledge about the health-education link across generations in Haiti.

According to our findings, Haitian mothers with a higher educational level had healthier infants than Haitian mothers with a lower educational level. In terms of statistics, one additional education year in Haiti is linked to a 13.6053 gram rise in Haitian birth weight and a 0.38 percentage point reduction in Haitian low birth weight risk.

Our findings are relevant to research into the impact of several variables on Haitian health. For example, policy responses to illnesses may have an influence on Haitian health; heavy rain and heat in Haiti can aggravate Haitian sickness; political violence and food scarcity in Haiti may connect to low survival rates; literacy, land reform, and nutrition initiatives may improve health (Hang et al., 2020a, 2020b, 2021a, 2021b).

**References**

Hang Nguyen, Kien Le, My Nguyen. (2020a). Higher School Levels And Healthy Infant In Guatemala. *Elementary Education Online*, 19 (4), 6460-6465.

Hang Nguyen, Kien Le, My Nguyen. (2020b). The Influence Of Education On Birth Weight And Incidence Of Low Birth Weight In DR Congo. *Elementary Education Online*, 19 (4), 6430-6435.

Hang Nguyen, Kien Le, My Nguyen. (2021a). Higher Education And Healthier Babies In Honduras: An Empirical Analysis. *Elementary Education Online*, 20 (1), 5314-5318.

Hang Nguyen, Kien Le, My Nguyen. (2021b). A Comparison Of The Effect Of Education On Healthier Birth In Egypt. *Elementary Education Online*, 20 (1), 5063-5068.