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Higher School Levels And Healthy Infant In Guatemala

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Abstract: This study investigates if Guatemalan mothers with higher levels of education have healthier children (N=24,062). According to our findings, Guatemalan mothers with a greater degree of education had healthier children than Guatemalan mothers with a lower level of education. In terms of statistics, one extra school year in Guatemala is associated with a 2.6787 gram increase in Guatemalan birth weight and a 0.31 percentage point decrease in Guatemalan low birth weight risk.

Keywords: Education; Guatemala; Birth Weight

Introduction

More than half of deaths in Guatemalan children under five in Guatemala are caused by malnutrition. Such health problems in childhood can have long-term consequences for Guatemalans, including cognitive impairment, increased vulnerability to chronic illnesses, reduced educational achievement, and decreased productivity. Due to the enormous costs, the focus has shifted to addressing children health concerns, with education seen as a viable answer.

This study investigates if Guatemalan mothers with higher levels of education have healthier children (N=24,062). Other studies have focused on the more obvious outcomes of education, such as incomes, occupations, and production, but this one adds to the body of knowledge by concentrating on the less visible outcomes, such as child health. Focusing on Guatemala, our findings add to the expanding body of knowledge about the intergenerational health-education link in Guatemala.

According to our findings, Guatemalan mothers with a greater degree of education had healthier children than Guatemalan mothers with a lower level of education. In terms of statistics, one extra school year in Guatemala is associated with a 2.6787

gram increase in Guatemalan birth weight and a 0.31 percentage point decrease in Guatemalan low birth weight risk.

Data

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

The statistical breakdown of the variables in this Guatemalan investigation is shown in Table 1. Our sample includes around 24,062 Guatemalan births. Guatemalan offspring had an average birth weight of 3200.3 grams, a log birth weight of 8.051, and a low birth weight rate of 12.0%. The average length of time spent in school in Guatemala is 3.698 years. The average age of Guatemalan responders is 28.296. 3.604 is the average number of children per Guatemalan respondent. 71.3% of the Guatemalan population lives in rural areas, with 97.0% of married Guatemalan. The Guatemalan offspring have an average age of 29.222 months. Males make up 51.0 percent of all Guatemalan children, while multiple births make up 0.6% of all Guatemalan births.

Table 1: Guatemalan Summary Statistics

	Mean	SD	N
	(1)	(2)	(3)
Guatemalan Birth Weight	3200.3	610.37	19797
Guatemalan Log Birth Weight	8.051	0.207	19797
Guatemalan Low Birth Weight	0.120	0.325	19797
Guatemalan Education	3.698	4.016	24062
Guatemalan Age	28.296	6.953	24062
Guatemalan Number of Offspring	3.604	2.359	24062
Guatemalan Living in Rural Areas	0.713	0.452	24062
Guatemalan Currently Married	0.971	0.168	24062
Guatemalan Offspring Age in Month	29.222	17.077	24062
Guatemalan Offspring Being Male	0.510	0.500	24062
Guatemalan Plural Birth	0.006	0.078	24062

Empirical Design

To see whether more educated Guatemalan women had healthier Guatemalan children, we built the following regression model,

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

is the number of educational years Guatemalan respondents completed. includes Guatemalan number of offspring, age, squared-age, whether Guatemalan lives in rural areas, whether Guatemalan is currently married, whether Guatemalan offspring is a plural birth, whether Guatemalan offspring is male, Guatemalan offspring age in month, squared-age in month, Guatemalan birth date fixed effects, Guatemalan residential cluster fixed effects and Guatemalan survey time fixed effects. is the error term.

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

Results

Birth Weight - The estimated relationship between Guatemalan mother education and birth weight in Guatemala are in Table 2. Column 1 displays the estimated relationship between Guatemalan mother education and birth weight in Guatemala where only the main explanatory is controlled for. We find that one more educational year of Guatemalan mother is associated with 7.0792 grams increase in birth weight.

The estimate only represent the connection between Guatemalan mother education and birth weight in Guatemala, while key elements in Guatemala are not taken into consideration. For example, Guatemalan with advantage backgrounds tend to have better health and education simultaneously (Le & Nguyen, 2019a, 2020a, 2021a, 2021b). As a result, from Columns 2 to 3, we add the collection of Guatemalan attributes and Guatemalan spatial-temporal fixed effects. Then, according to Column 3, we find that one additional school year in Guatemala is linked to a 2.6787 gram gain in birth weight.

Table 2: Guatemalan Birth Weight

	(1)	(2)	(3)
Guatemalan Education	7.0792***	1.6474	2.6787**
	(1.0463)	(1.2231)	(1.3814)

Observations	19797	19797	19787
Cluster FE	.	.	X
Characteristics	.	X	X

Log Birth Weight - The estimated relationship between Guatemalan mother education and log birth weight in Guatemala are in Table 3. Column 1 displays the estimated relationship between Guatemalan mother education and log birth weight in Guatemala where only the main explanatory is controlled for. We find that one more educational year of Guatemalan mother is associated with 0.17% gain in birth weight.

The estimate only represent the connection between Guatemalan mother education and birth weight in Guatemala, while key elements in Guatemala are not taken into consideration. As a result, from Columns 2 to 3, we add the collection of Guatemalan attributes and Guatemalan spatial-temporal fixed effects. Then, according to Column 3, we find that one more educational year of Guatemalan mother is associated with 0.12% gain in birth weight.

Table 3: Guatemalan Log Birth Weight			
	(1)	(2)	(3)
Guatemalan Education	0.0017***	0.0001	0.0012***
	(0.0004)	(0.0004)	(0.0005)
Observations	19797	19797	19787
Cluster FE	.	.	X
Characteristics	.	X	X

Low Birth Weight - The estimated relationship between Guatemalan mother education and low birth weight in Guatemala are in Table 4. Column 1 displays the estimated relationship between Guatemalan mother education and low birth weight in Guatemala where only the main explanatory is controlled for. We find that one more educational year of Guatemalan mother is associated with 0.09 percentage point reduction in low birth weight.

The estimate only represent the connection between Guatemalan mother education and birth weight in Guatemala, while key elements in Guatemala are not taken into consideration. As a result, from Columns 2 to 3, we add the collection of Guatemalan

attributes and Guatemalan spatial-temporal fixed effects. Then, according to Column 3, we find that one more educational year of Guatemalan mother is associated with 0.31 percentage point reduction in low birth weight.

Table 4: Guatemalan Low Birth Weight			
	(1)	(2)	(3)
Guatemalan Education	-0.0009*	-0.0022***	-0.0031***
	(0.0006)	(0.0007)	(0.0008)
Observations	19797	19797	19787
Cluster FE	.	.	X
Characteristics	.	X	X

Conclusion

This study investigates if Guatemalan mothers with higher levels of education have healthier children (N=24,062). Other studies have focused on the more obvious outcomes of education, such as incomes, occupations, and production, but this one adds to the body of knowledge by concentrating on the less visible outcomes, such as child health. Focusing on Guatemala, our findings add to the expanding body of knowledge about the intergenerational health-education link in Guatemala.

According to our findings, Guatemalan mothers with a greater degree of education had healthier children than Guatemalan mothers with a lower level of education. In terms of statistics, one extra school year in Guatemala is associated with a 2.6787 gram increase in Guatemalan birth weight and a 0.31 percentage point decrease in Guatemalan low birth weight risk.

Our findings are relevant to research into the impact of several variables on Guatemalan health. For example, policy reactions to diseases may have an impact on Guatemalan health; heavy rain and heat in Guatemala can aggravate Guatemalan sickness; political violence and food scarcity in Guatemala may connect to low survival rates; literacy, land reform, and nutrition programs in Guatemala may enhance health (Nguyen, 2021a, 2021b; Le, 2021a, 2021b).

References

Le, K. (2021a). Political Violence and Early Childhood Health in Eastern Uganda. Review of International Geographical Education Online.

Le, K. (2021b). The Effects of Removing User Fees for Health Care on Child Development. Review of International Geographical Education Online.

Nguyen, M. (2021a). The Unavailability of Childcare during the COVID-19 Pandemic and Parental Mental Health. Review of International Geographical Education Online.

Nguyen, M. (2021b). The Impacts of Political Violence on Birth Outcomes: Evidence from Ethnic Conflicts in Coastal Kenya. Review of International Geographical Education Online.