

THE IMPACT OF HURRICANE MARIA ON PUERTO RICO'S CHILDREN:
ANALYSIS AND INITIAL RECOMMENDATIONS

YOUTH DEVELOPMENT INSTITUTE OF PUERTO RICO (YDI)

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About the Youth Development Institute of Puerto Rico (YDI)

The Youth Development Institute of Puerto Rico (Instituto del Desarrollo de la Juventud) is a nonprofit organization working to advance public policies- at both the federal and commonwealth level- that improve the lives and outcomes of children and youth in Puerto Rico. Our work includes the collection dissemination of **data**; the development of research-driven **public policy** recommendations; and **advocacy** work that is driven by both data and people. We are the only organization focused on policy and advocacy around children's issues in Puerto Rico.

Our Focus

We are focused on improving the economic situation of low-income children and their families, in order to achieve a significant reduction in Puerto Rico's child poverty rate, which in 2015 stood at 58%. We believe that reducing child poverty will require a two-generation approach that removes barriers to work and provides pathways to opportunities for both parents and children.

More Information

If you want to know more and get involved in the public policy efforts that the YDI advances to reduce child poverty, please access www.juventudpr.org, or [www.facebook / IDJ.PR](https://www.facebook.com/IDJ.PR) or send us an email to info@juventudpr.org.



The Impact of Hurricane Maria on Puerto Rico's Children: Analysis and Initial Recommendations

Introduction

The majority of Puerto Rico's children and youth were living in dire conditions the day before Hurricane Maria ravaged the island. The Youth Development Institute of Puerto Rico's Well-Being Index, an in-depth snapshot of the living conditions of children and young adults between 0 to 21 years of age in Puerto Rico, consistently gave a "D" grade to the island, due to high levels of child poverty and low levels of academic achievement, among other factors.

Hurricane Maria threatens to exacerbate a situation that was already critical by sharply increasing child poverty levels, accelerating the migration of families with children and creating barriers for Puerto Rico's children to contribute to the island's economic development when they become adults. However, the recovery process presents an opportunity to change course. This will require an increased recognition of the importance of children to the future of the island, along with a commitment to prioritize this population in decision making processes.

In this brief report, the Youth Development Institute of Puerto Rico presents an analysis and initial recommendations following Hurricane Maria. The report focuses on the hurricane's impact on the economic security of Puerto Rican families with children, as well as children's mental health and academic achievement. The goal is to jumpstart the conversation about children in Puerto Rico in the aftermath of the natural disaster and provide suggestions to those interested in prioritizing children as a key population in the island's recovery.

This analysis is based on information that is currently available to us: census data and literature on the impact of Hurricane Katrina and other natural disasters that affect children and the economy. It is important to stress the need to conduct extensive research of Hurricane Maria's impact in various areas of child development in Puerto Rico and, based on this research, develop a wide range of recommendations.

At the moment, we have enough information to make three projections. First, that as a result of Hurricane Maria, more children will fall into poverty in an island where child poverty rates were already alarming. Second, that more families with children will be forced to migrate, thus threatening the sustainability of an island that had lost one third of its child population

in only 10 years. And third, that the chance to have a successful adulthood could be cut short for many children due to an increase in mental health conditions and a decrease in academic achievement. Furthermore, each one of those effects could have an adverse impact on the Puerto Rican economy.

Increase in child poverty

Hurricane Maria is a great threat to the economic security of most families with children in Puerto Rico and it has created conditions that can lead to an increase in child poverty. The economic security of families with children throughout the island was already precarious before Hurricane Maria hit. In 2016, 56% of children¹ lived in poverty. This percentage includes 36% of children living in extreme poverty.² Furthermore, 14% of Puerto Rican children lived close to poverty levels.³ It could be inferred that child poverty was correlated to job insecurity. In 2015, 57% of children lived in homes where their parents did not have secure employment. In other words, neither parent had full-time and regular employment.

The threat of an increase in child poverty is especially severe in certain regions, such as Puerto Rico's southeast and the central mountainous region. Besides being hit the hardest by storm, these regions were already affected by high poverty levels and household economic insecurity before Hurricane Maria. In the southeast region, where the eye of the hurricane came ashore with winds up to 155 mph, most municipalities already had higher than average child poverty rates than the rest of the island. For example, in the municipalities of Naguabo, Patillas and Maunabo, seven out of 10 children lived in poverty in 2016. In these municipalities, child poverty was probably linked to their parent's low labor force participation. As we can see in Table 1, these municipalities had a large proportion of families with children in households where at least one parent was unemployed or out of the labor force. In the case of Patillas, this number represented 74% of households with children.

TABLE 1: CHILD POVERTY AND LABOR PARTICIPATION IN SELECTED MUNICIPALITIES IN SOUTHEAST PUERTO RICO

<i>Municipalities</i>	<i>Child Poverty (2015)</i>	<i>Child Poverty (2016)</i>	<i>Families with Children Where One or Both Parents Are Not Working* (2016)</i>
<i>Puerto Rico</i>	57%	57%	49%
<i>Arroyo</i>	57%	60%	47%
<i>Maunabo</i>	69%	68%	50%
<i>Naguabo</i>	70%	68%	56%
<i>Patillas</i>	74%	73%	74%
<i>Yabucoa</i>	62%	58%	62%

*Note: Unemployed parents includes mothers and fathers that are unemployed and out of the labor force.

Another area that was extremely affected was the central mountainous region, where some of the highest rainfall levels were recorded. Rainfall in these areas reached up to 20 inches and, due to the geography of the region, many municipalities were

left uncommunicated. Five of the 10 municipalities with the highest poverty rates in Puerto Rico are located in this region. In 2016, Ciales had a child poverty rate of 72%, Orocovis of 70%, Adjuntas of 76% and Barranquitas of 74%. Meanwhile, Maricao had an extremely high child poverty rate of 82% in 2015.⁴

Table 2 shows how all of these municipalities, except Comerío, Morovis, Orocovis and Utuado, experienced an increase in child poverty between 2015 and 2016. Despite a reduction in the poverty level in Maricao, it is important to highlight that in this municipality the child poverty rate increased by 10 percentage points between 2014 and 2015.⁵

In these municipalities, the lack of parental employment also seemed to be connected to child poverty. The municipality with the lowest child poverty rate in that group, Cayey, also had the lowest percentage (35%) of parents without work. In the remaining municipalities, more than half of the families had at least one parent that was unemployed. In the rest of the municipalities more than half of families with children had at least one parent not working.

TABLE 2: CHILD POVERTY AND LABOR PARTICIPATION IN SELECTED MUNICIPALITIES IN THE CENTRAL MOUNTAINOUS REGION OF PUERTO RICO⁶

<i>Municipalities</i>	<i>Child Poverty (2015)</i>	<i>Child Poverty (2016)</i>	<i>Families with Children Where One or Both Parents Are Not Working(2016)</i>
<i>Adjuntas</i>	72%	76%	63%
<i>Barranquitas</i>	74%	74%	69%
<i>Cayey</i>	50%	53%	35%
<i>Ciales</i>	70%	72%	69%
<i>Comerío</i>	74%	73%	66%
<i>Jayuya</i>	66%	74%	54%
<i>Las Marías</i>	73%	78%	54%
<i>Maricao</i>	82%	79%	58%
<i>Morovis</i>	64%	63%	55%
<i>Orocovis</i>	71%	70%	61%
<i>Utuado</i>	64%	63%	65%
<i>Villalba</i>	68%	65%	51%

Note: Unemployed parents includes mothers and fathers that are unemployed and out of the labor force.

The economic insecurity and vulnerability of families in these municipalities could be further compromised by the loss of their homes. A study conducted by the Center for American Progress suggests that low-income families are more vulnerable to the loss of their home during natural disasters due to the poor quality of their housing.⁷ This in turn negatively impacts these families' economic security, since often they are not adequately insured against this type of catastrophe. For example, after Hurricane Harvey in Texas, it was found that only 17% of homes had flood insurance due to economic vulnerability.⁸ The need to find new housing or replace what was lost could take families to new levels of vulnerability.

Beyond the loss of the home, economic insecurity among families, could increase to even higher levels as a result of the impact of the hurricane on employment. Two months after Hurricane Maria hit, 15,000 people had applied for unemployment benefits. Before the hurricane, and during the economic crisis, this number was about 4,000.⁹ History has also shown that natural disasters of the magnitude of Hurricane Maria could lead to a massive loss of employment. After Hurricane Katrina hit New Orleans, the city's economy lost 93,000 jobs and \$2.9 billion dollars in wages during the 10 subsequent months.¹⁰ In order to understand the scale of this challenge, one must consider the fact that the population of New Orleans before Hurricane Katrina was over 484,000, while the population of Puerto Rico was 3.4 million before Maria.

The increased economic insecurity of families could lead to various scenarios in terms of increases in child poverty island-wide. One scenario would be that the levels of child poverty could rise to 64.5%. This is the percentage of children that lived in poverty or close to poverty in 2016 (125% poverty rate). This would imply that approximately 60,000 additional children could fall into poverty. A second, and more pessimistic scenario would be that the levels of child poverty could rise to 71%, which was the 2016 rate of children living in poverty or what are considered to be “low-income” families (150% poverty rate). In that scenario, over 100,000 children could fall into poverty.

High levels of child poverty levels pose a challenge for Puerto Rico's economic development and long-term fiscal viability. Children who experience poverty, especially persistent poverty, are less likely to complete higher education¹¹, more likely to have health problems¹² and be poor as adults¹³. Hence, when child poverty is not addressed it can have a long term impact on the workforce, and government costs. As an example, according to an estimate by Harry Holzer, an economist, child poverty costs the United States over \$500 billion a year on lost capital and government expenses related to crime and health services.¹⁴

The exodus of families with children

The economic insecurity created by the hurricane, along with a lack of access to basic services, has driven a migratory exodus that threatens to accelerate the reduction of the total number of children in Puerto Rico. Between 2006 and 2016, the island lost one third of its childhood population, and migration forecasts suggest that this number could increase. A study conducted by the Center for Puerto Rican Studies estimates that the island could lose 470,335 people or 14% of its population in only two years, among them 42,771 children between the ages of five and 17 and 13,000 children under four years of age. This would represent a loss of approximately 55,770 children, or 8% of the current population of children in the island, in only one year.¹⁵ When comparing statistics from 2006 to the childhood population estimate for 2019, while also taking into account this study, the island would see a reduction of 37% of its childhood population. It should be noted that this estimate does not take into account a reduction in the fertility rate.¹⁶

The decrease in childhood population presents a challenge to the island's economic and fiscal sustainability. Research has established that aging of the population strains government resources due to increased health care and pension costs. In

the case of Puerto Rico, this fiscal strain will be potentially aggravated by a significantly smaller revenue base due to the losses in child population, and high levels of child poverty¹⁷.

Impact on mental health and academic achievement

The experience of a hurricane, along with its effects, has been shown to lead to develop post-traumatic stress disorder (PTSD) among children. This PTSD could last for years after the hurricane, affect their academic achievement and, eventually, affect their potential success in their adult lives. The situation is further complicated by the fact that hurricane Maria caused the most damage in regions where the majority of children already lived in poverty. This means that, before the hurricane, many children were already dealing with living conditions that threatened their mental health. Studies have shown that living in poverty could lead to chronic stress in children,¹⁸ which has adverse effects in learning,¹⁹ memory²⁰ and is also linked to health problems,²¹ among other issues.

After Hurricane Maria, the stress caused by poverty is compounded by the stress of the natural disaster. A great number of studies have shown how natural disasters cause post-traumatic stress disorder and other mental health conditions that could last for years.²² In addition, the ability of parents and guardians to handle these situations might also be hindered by their own experiences. A study of low-income mothers in New Orleans conducted after Hurricane Katrina showed that one fourth of these mothers were still dealing with post-traumatic stress disorder four years after the hurricane.²³

Therefore, the majority of children in Puerto Rico are facing two sources of stress: poverty and the effects of a natural disaster. If we consider the links between stress and academic performance, we can conclude that there is a high likelihood that academic achievement will be affected during the recovery process. A study on academic achievement after Hurricane Katrina found a slight negative impact among those students that were displaced after the hurricane. This impact was exacerbated in cases where many school days were lost. However, the negative impact disappeared among those students that enrolled into schools with higher academic achievement rates²⁴. It is worth noting that the study did not take into account students that did not enroll in school after displacement and did not attend school for an extended period of time.

The impact of the hurricane on mental health and academic achievement will be seen during the next decade —and perhaps beyond. A study conducted by the sociologists Fothergill and Peek, *Children of Katrina*, followed young people affected by Katrina for seven years. It found that those who already were in vulnerable situations before the hurricane faced the greatest negative effects from the hurricane. The risk of negative effects seemed to increase in cases where a long period of time elapsed without schooling due to displacement. Many of these young people failed to complete high school and find work as they transitioned into adulthood. Although a direct correlation has not been established, as of today, New Orleans is one of the cities with the highest concentration of "Opportunity Youth" —young people between the ages of 16 and 24 that are neither working nor studying.²⁵ An increase in the number of youth out of work and school were in Puerto Rico, would also likely lead to a loss of economic productivity, and increased government costs.

RECOMMENDATIONS

FOR ALL SECTORS

Monitor indicators in order to establish needs

Aside from the need to monitor poverty levels and the migration of Puerto Rico's childhood population —given the island's specific context— monitoring indicators could provide further information on the needs of children and their families. For example, more information could be obtained on the hurricane's impact by monitoring truancy, academic achievement and graduation rates. From what we have learned about the aftermath of Hurricane Katrina, other indicators that should be monitored are post-secondary educational attainment, labor force participation and youth unemployment.

In order to monitor these indicators, a childhood and youth observatory could be created during the recovery period. This observatory could be in place for up to 10 years after the hurricane, in order to monitor long-term effects on employability indicators and other indicators that would show how the Maria generation is performing as they transition into adulthood.

Monitoring indicators through tools like a data observatory would allow different sectors, both in Puerto Rico and in the diaspora; as well as government, private and community based organizations, to identify needs and set priorities among the services and programs that could be offered.

FOR THE PHILANTHROPIC SECTOR

Invest in projects and programs that would improve the economic security of families with children, mental health services and youth support services

Without a doubt, the philanthropic sector will play a very important role in the island's recovery. First and foremost, it is important to consider investments in the southeast and central mountainous regions. These areas have been traditionally underserved, and as this report demonstrates, they are the areas that were most vulnerable to the effects of the hurricane. Investments in these areas might require additional start-up costs, since organizational infrastructure might not be as developed.

Due to pre-existing high levels of child poverty in Puerto Rico, and the large number of families with children that have left because of a lack of economic opportunity, we suggest investing in programs that assist families with children and youth in their integration into industries with a high growth potential in the island. These types of programs should provide skills development, as well as support and incentives for entering the labor force, such as child care and transportation. Investments should also include evaluations of those programs, in order to take advantage of the opportunity to build an evidence base of programs that work in Puerto Rico.

Mental health services, both for children and their caretakers, are essential in order to guarantee optimal development and a minimal negative impact on academic performance and achievement. It is recommended that community organizations be trained in evidence-based practices and that they receive tools that will enable them to expand their client capacity, given that the need for these services will likely be very high over the next years.

Finally, special attention should be given to adolescents, as they face difficulties in their transition to adulthood after this type of natural disaster. One factor that has been proven to help young people handle this type of crisis, and emerge successfully from it, is the presence of an adult that supports them. Therefore, mentoring services that simultaneously help young people get on track towards post-secondary education and employability are good investment options. For example, in New Orleans, projects such as the Youth Empowerment Project and Café Reconcile were created as alternatives to provide those tools to young people and adults. This included mentoring and guidance on enrollment in post-secondary programs, internships and practical trade skill programs, entrepreneurship, life skills and financial literacy.

Invest to generate knowledge, public policy and advocacy

Beyond direct services, it will be important to ensure that the needs of children and their families are addressed during this recovery period. In order to achieve this, it will be necessary to gather data to assess needs and conduct research on best practices that have been successful in other countries and states. Public policy experts in a broad range of fields within children and youth issues will also be needed in order to advise and provide recommendations to government agencies on how to best serve these populations. Finally, data-gathering and public policy efforts should be complemented by citizen engagement through advocacy that demands accountability on the conditions that children are living in. This advocacy response will require a level of organization and infrastructure that could only be achieved if adequate resources are available.

FOR FEDERAL LAWMAKERS

Extending the Child Tax Credit to families with one or two children in Puerto Rico

Although the majority of Puerto Rican families do not pay federal income taxes, they pay federal payroll taxes. Currently, families with three or more children in Puerto Rico can use these federal taxes to claim the Child Tax Credit. However, families with three or more children only make up 12% of all families with children in the island. The Congressional Task Force on Economic Force Growth for Puerto Rico, a bipartisan congressional working group, has already recommended that this tax be extended to families with one and two children in Puerto Rico. This recommendation gains increased relevance now that we know how many families have lost income as a result of the hurricane and have faced a series of extraordinary expenses due to the lack of basic services. Such a tax credit could bring an average benefit of \$700 to 355,000 families, which would provide relief from economic losses of the hurricane and incentivize work.

Creating a Workforce Development Fund for Reconstruction through the Workforce Innovation and Opportunity Act's (WIOA) Disaster Dislocated Worker Grants

Although Puerto Rico will face loss of employment, certain sectors will experience growth due to the reconstruction process. For example, after Hurricane Katrina, the construction sector experienced growth in New Orleans. In Puerto Rico's case, we could also expect to see increased opportunities in areas related to infrastructure and telecommunications. This presents an opportunity to develop skills for parents and young people who do not have much experience in the labor force, while also ensuring economic security for families as these skills are developed. We recommend that \$405 million be appropriated to the Disaster Dislocated Worker Grants program under the Workforce Innovation and Opportunity Act (WIOA) to create 12,000 temporary and subsidized jobs and 6,000 work experiences for young people.

FOR THE FINANCIAL OVERSIGHT BOARD

Protect investments in children and youth, as well as their families, especially those leading to economic security, addressing mental health and supporting young people

The optimal development and retention of children will be key to avoiding another fiscal crisis. On the one hand, child poverty—which could worsen after the hurricane—could lead to higher government expenses in health services and criminal prosecution over the long term. On the other hand, increased migration of families with children would result in an aging population, which in turn would lead to a greater need for expenses in pensions and health services, as well as less revenue to address these needs. Therefore, it is important that in their fiscal planning processes the Financial Oversight Board take into account children, youth and their families as part of their fiscal sustainability strategy. Furthermore, the board should consider reallocating resources in order to ensure that families with children have the support needed to overcome poverty and promote the well-being of their children. As families with children feel they have opportunities in Puerto Rico, they will be less likely to migrate.

FOR PUERTO RICO'S EXECUTIVE BRANCH AND LEGISLATURE

Reinstating and optimizing the local earned income tax credit

Earned income tax credits are one of the most effective public policy measures available to reduce poverty and incentivize work. However, the only credit for work available in Puerto Rico was eliminated in 2014. Since Puerto Rican families with children do not have access to credits for work at a federal level (with the exception of the 12% of families with three or more children that qualify for the Child Tax Credit), reinstating this type of credit in Puerto Rico is essential to reduce child poverty and for making Puerto Rico a more competitive environment for working families.

Besides reinstating this credit, it is recommended that it be optimized so that it is targeted to these families. The Urban Institute recommended a series of changes that could be made to a new program; these changes would include targeting the credit to low-income working families with children: those who are known as the "working poor".²⁶

Ensuring sufficient funds are available to assign social workers and psychologists to every school

As revealed in a hearing before the Puerto Rico's Senate's Education and University Reform Commission on November 8, not all schools have social workers on site. Given the increased and persisting needs that will result from the hurricane and poverty conditions, it is recommended that the Legislature work on measures to ensure the presence of social workers and psychologists in every school, as well as their training in evidence-based practices to handle trauma. Beyond mandates, it is important that this is taken into account during the budgetary process and that the necessary resources are assigned so that they may be implemented.

Creating a working group to develop a public policy agenda in order to address the migration crisis among families with children

It is of the utmost importance that measures be taken to actively address the exodus of families with children. It is therefore recommended that a Working Group on the Migration of Puerto Rican Families be created so that, over a period of three months, it can focus on analyzing the problem of migrating families with children and develop a public policy agenda to address this phenomenon. The group could be based within the Legislative or Executive Branch and should include members of various branches of government, government agencies, the private sector, community organizations and entities that focus on children and family issues.

Notes and References

¹ In this report, when we talk about children we refer to minors between the ages of 0 to 17.

² Extreme poverty is defined as those families with an income that is 50% lower than the annual income set as the poverty threshold, as determined by the household's composition.

³ Kids Count Data Center- <http://datacenter.kidscount.org/data#PR/4/0/char/0>

⁴ US Census

⁵ The poverty percentages shown here are consistent with the federal poverty definition and parameters, which take into account the size of the household and their annual income; therefore, these poverty thresholds will vary depending on household composition. For example, in 2015, the poverty line for a family of two adults and two children was \$24,036 but the poverty line for a family composed of a single mother or father and a minor was of \$16,337.

⁶ These municipalities were selected because they received the highest amount of rainfall in inches, besides having high rates of child poverty.

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¹⁶ This projection represents the change of the percentage change between the population of children under 18 between 2006 and 2019, taking into consideration the migration estimate made by the Center for Puerto Rican Studies.

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