



Assessment of preparedness and response to natural disasters in families with children with suspected or diagnosed developmental disabilities



Bernice Ortiz-Vélez and Gabriela Miranda-Rodríguez, LEND Trainees

Dr. Carol Salas-Pagán, Ms. Ilija Torres-Avillán, Dr. María Reyes-Medina, Dr. Mario Rodríguez-Sánchez, LEND Faculty
 Leadership Education in Neurodevelopmental and related Disabilities (LEND) Program
 Westchester Institute for Human Development, University Center for Excellence in Developmental Disabilities and New York Medical College

BACKGROUND

- Puerto Rico has experienced severe natural disasters throughout the years, most notably, Hurricane María on September 20, 2017 and earthquakes of high magnitudes on January 2020, being 6.4 the most impactful one to occur
- Although families with children with DD recognize the vulnerability of their children to the negative impacts of adversities, they tend to be unprepared to meet their needs in disasters
- Studies suggests that the delivery of emergency kits and informational folders can be effective in raising disaster awareness and planning for families of children with DD.
- Childcare centers tend to have an adequate level of preparedness. However, these are not well informed of how vulnerable families are to possible natural disasters or emergencies.

methodology

Design	Descriptive non-experimental transversal study
Participants	Parents older than 21 years of age, who are caregivers of children aged 0-5 years with suspected or diagnosed developmental disabilities
Sample	13 caregivers
Instruments	Self-administered Questionnaire (37 Questions)
Data analysis	Performed using the Statistical Package of Social Science (SPSS 26 ver.)

Discussion/next steps

- The families with children with DD perceived themselves as little prepared (38%) before the events and 31% after. Among the needs for preparedness before, not having a communication and evacuation plan (38.5%; 46.2%) or having electricity generators (23.1%), were some of the issues identified. In terms of their needs after the natural disasters, the caregivers identified as their top needs: lacking electricity, telephone communication and gasoline. Similarly, families expressed challenges receiving the necessary early intervention (15.4%), therapy (23.1%), and transportation services (76.9%) for their children.
- ***Limitations include:** small time-frame, COVID-19 pandemic (hindered the research procedure), small sample size (n=13)
- **Recommendations for the future:** obtain a larger sample covering the whole island and perform qualitative studies in order to achieve a better comprehension of the needs.

Results/Progress to date

Objectives & community partners

• Identify the strategies and needs for natural disaster preparedness of families with children with DD

- University of Puerto Rico, Medical Sciences Campus Preschool Development Center

• Explore the strategies and response needs after natural disasters of families with children with DD

- PR Department of Health- Avanzando Juntos (Early Intervention Program PR IDEA Part C)

• Determine the needs of families with children with DD to face a natural disaster

Table 1. Sociodemographic Data

Sociodemographic Data	Categories	Percentage (%)
Caregivers	Mothers	69.2
	Fathers	15.4
	Other	15.4
Medical insurance	Private	46.2
	Public	46.2
		46.2
Residential zone	Rural	30.8
	Urban	69.2
Family composition	3 members	30.8
	4 members	53.8
	5 members	7.7
Income level	Less than \$10,000	30.8
	\$10,000 to \$19,999	15.4
	\$20,000 to \$29,999	15.4
Child with suspected DD	Male	84.6
	Female	15.4
	Provisional diagnosis	Speech and language problems
Autism		15.4
Motor developmental delay		15.4
Socioemotional developmental delay		7.7
Other Suspected diagnosis		23.1

Figure 1. Family preparedness perception before disasters

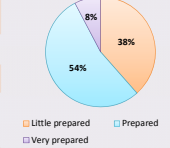


Figure 2. Family preparedness perception at the present time



Figure 3. Preparedness resources before hurricane and earthquake

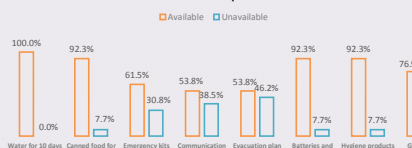


Figure 4. Preparedness resources at the present time

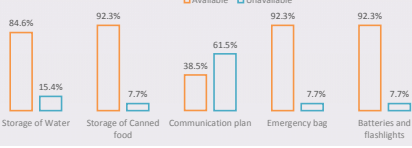


Figure 5. Service challenges after disasters

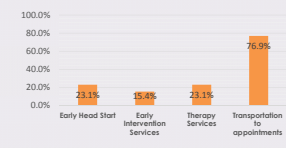


Figure 6.



Table 2. Special Findings

Special Findings	Categories	Percentage %
Support systems after disasters	Family support	76.9
Access to main meals in the aftermath of the disasters	Concern that food would run out	84.6
Emergency contacts needs	Familiar phone directory	53.8
	Community response centers	46.2
	Emergency response agencies	38.5
Preferred media to receive	Shelter directories	15.4
	Radio	53.8
	Central media	46.2