Research Paper

Child-Centered Disaster Risk Reduction – Evidence from the Philippines

Laura Miret, MIA ‘19 at Columbia University

Submitted March 31, 2019

Final paper for Allison Anderson’s course: Practicum on Education in Emergencies

Introduction

On November 8th, 2013 typhoon Haiyan struck the Philippines affecting over 14 million people and killing over 6,300 people. Almost six million children were affected\(^1\). Less than a month earlier, a 7.2 magnitude earthquake had severely damaged over 53,000 houses in the Bohol province, affecting over half a million children\(^2\). On average, 22 cyclones enter the Philippines each year, of which six are estimated to cause substantial losses\(^3\).

The Philippines is not a unique case. Over the last decade, we have witnessed a rise in the number and the scale of natural disasters globally. Although disaster risk management practices have helped reduce the damage caused, low- and lower middle-income countries still bear much of the economic and human costs\(^4\). At the same time, these countries are hosting the world’ largest population of youth and children. Out of the 1.8 billion young people in the world, 90% leave in developing countries\(^5\). Considering these statistics and the impact that natural disasters have in

---

\(^3\)OCHA Philippines
\(^5\)Restless Development
development, low- and lower middle-income countries are in a unique position to leverage youth’s potential to better prepare for natural hazards.

Among the existing Disaster Risk Reduction (DRR) approaches, this paper focuses on Child-Centered Disaster Risk Reduction (CCDRR), known for recognizing and building on children and young people’s capabilities. The paper examines the existing body of evidence by including three systematic reviews that encompass over 84 studies with quantitative, qualitative, mixed methods and a quasi-experimental study. In parallel, acknowledging the additional challenges that low- and lower middle-income countries might face, this review delves into the evidence available on Child-Centered Disaster Risk Reduction interventions in the Philippines. For the evidence on interventions in the Philippines, ten studies have been considered, ranging from qualitative case studies to programme evaluations and empirical research.

The paper is divided into three sections. The first section introduces the concept of disaster risk reduction within the context of resilience-building. This section also presents the different levels at which interventions can take place, setting the framework for CCDRR. The second section centers on CCDRR interventions, exploring the expected outcomes and reviewing the evidence at the global level as well as for the Philippines. The last section concludes that the existing body of evidence for the Philippines is insufficient to attribute long-term resilience to CCDRR programs and that more robust studies are needed to inform practice.
Background

Over the last ten years, resilience has taken center stage in development and humanitarian discussions. Defined as “the ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management”\(^6\), resilience aims at strengthening local systems and networks to better respond and recover from threats. By interlinking crisis response and development, resilience has become one of the centerpieces of the Humanitarian Development Nexus and is now part of global frameworks for development and for humanitarian action, e.g. the 2030 Agenda for Sustainable Development with SDG 11 to “make cities and human settlements inclusive, safe, resilient and sustainable”\(^7\) and the Agenda for Humanity with its goal of reinforcing local systems and investing according to risk.

As resilience’s weight has increased, the Education sector has drawn attention both from the development sector as well as from the humanitarian community. As a central social service to society targeted at younger generations, education is uniquely positioned to contribute to building resilient societies, communities, and individuals. As Sterling (2009) highlights, education’s service to society goes beyond its instrumentalization for delivering resilience messages, to cover the broader process of learning that serves to develop children’s capabilities which, in turn, make them more resilient.

---

\(^6\) UNISDR  
\(^7\) 2030 Sustainable Development Goals
Although resilience-building through education can be both directed at better recovering from conflict or from naturals disasters, this paper focuses only on the interventions targeted at natural disasters, known as Disaster Risk Reduction (DRR). UNISDR defines DRR as those activities “aimed at preventing new and reducing existing disaster risk and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development.” On the global stage, the Sendai Framework for Disaster Risk Reduction 2015-2030 and its affiliated group focused on DRR in Education, the Global Alliance for Disaster Risk Reduction & Resilience in the Education Sector, and the Children in a Changing Climate alliance are driving much of the work in this field.

The incorporation of DRR in education can take place at three main levels; individual (students), community (schools and community-based programs), and national (education sector). Although most approaches include interventions that prioritize a specific level, we can find that, far from being isolated, these levels are interconnected, which usually leads to trickling effects across them. At the individual level, the most prominent framework is the Child-Centered Disaster Risk Reduction (CCDRR), which is regularly used by agencies like UNICEF, Plan International, and Save the Children. Among other activities, CCDRR teaches children how to assess risk and react to hazards. At the community level, there is not a single dominant frame to guide interventions but rather an array of tools and methods available under the umbrella term of Community Based Risk Reduction (CBRR). Lastly, at the national level, we can find the Comprehensive School Safety framework developed by UNISDR and the Global Alliance for

---

8 UNISDR
Disaster Risk Reduction & Resilience in the Education Sector. This framework aims to guide Education Sector policies and plans and comprises plans to include DRR in schools’ curriculum.

Given the increased importance of developing local capacity, this paper centers on CCDRR interventions aimed at “recognizing and drawing on the rights, needs and capacities of children in reducing risk and enhancing the resilience of communities and nations” (Save the Children 2013) “with the ultimate goal of safeguarding the rights of children relating to disaster risk. It focuses on actively involving children in DRR, both in DRR that is for children, and DRR that is with children” (UNICEF 2014) “while recognizing that children’s needs and capacities vary according to multiple factors such as age, gender, geography and socio-economic status” (Save the Children 2013). The study prioritizes evidence from the Philippines, which stands out for its young population (40% under 189) and proneness to natural disasters (ranked top 3 in the World Risk Index10).

Findings

This section examines the effectiveness of Child-Centered Disaster Risk Reduction in the context of the Philippines, including interventions both for children and with children. In order to contextualize the research, this paper first provides an overview of the objectives that such interventions aim to achieve. Once these are established, the paper summarizes the evidence available at the global level and then examines whether similar conclusions can also be reached in the Philippines.

9 World Bank 2018
10 OCHA Philippines
The objectives of CCDRR interventions here summarized are informed by Plan International’s Theory of Change\textsuperscript{11} (see chart below).

At the level of rights holders, the outcomes are divided into three main categories: capacity, citizenship, and well-being. Capacity change comprises both children’s increased knowledge of risks and their enhanced DRR skills. Citizen change measures the extent to which children take actions (e.g. raise awareness) to reduce risks in their communities and their schools. Lastly, well-being change measure encompasses outcomes related to safer school environments and better-prepared communities to face natural hazards. Some studies also discuss the role of CCDRR at the level of the duty-bearers with, for instance, changes in national

\textsuperscript{11} Kumar, Arvind “Child-Centred Disaster Risk Reduction” Plan International
policies. However, establishing a correlation between a local-level intervention and a change at the national level is complex and it would require a deeper study of the other factors influencing national policy. Consequently, this paper solely focuses on the three core outcomes listed above.

At a global level, there have been a number of studies assessing CCDRR interventions. This paper summarizes the findings of three systematic reviews that covered over 84 independent studies. The majority of these studies were conducted following qualitative designs, although there are also some mixed methods and quasi-experimental designs. The most common tools for data collection were questionnaires and interviews. Most studies confirmed a positive link between CCDRR and capacity changes. Interventions were found to be effective in increasing children’s knowledge of hazard risks and the protective actions to be taken in case of an emergency (Johnson et al. 2014, Pfefferbaum et al. 2018). CCDRR programs also enhanced children’s awareness of the importance of DRR (Amri et al 2017). However, there were mixed results concerning children’s self-confidence in being able to respond to a disaster. In terms of citizenship changes, several studies indicated an increase in household discussions around DRR after participating in the programs. As for well-being changes, few studies measured them. For the ones that did, they found that households of participants seemed better prepared (e.g. by having emergency kits).

Despite these rather positive findings, the reviews also note that there were numerous research limitations that should not be disregarded. The main constraint in the Johnson et al. review was that most studies used questionnaires filled by children to validate the interventions’ effectiveness. By relying on children’s self-reporting, the findings might be affected by biases and, therefore, not provide an accurate picture. In addition, small samples and the lack of baselines or
control groups also limited the research’s robustness. An additional remark that is particularly relevant for the research on CCDRR was that programs did “not articulate an explicit theory or model of how [they] would enable specific learning outcomes, or how program outcomes would achieve wider impacts such as improved disaster resilience” (Johnson et al. 2014).

The search for evidence of CCDRR in the Philippines yielded 10 studies, most of them case studies. A summary is provided below:

<table>
<thead>
<tr>
<th>Study</th>
<th>Author</th>
<th>Design</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children and Disaster Risk Reduction: Taking stock and moving forward</td>
<td>Emma Back, Catherine Cameron and Thomas Tanner</td>
<td>Qualitative - Case study</td>
<td>2009</td>
</tr>
<tr>
<td>Child-Centred DRR Toolkit</td>
<td>Plan International</td>
<td>Qualitative - Case study</td>
<td>2010</td>
</tr>
<tr>
<td>Enabling Child-Centred Agency in Disaster Risk Reduction</td>
<td>Fran Seballos, Thomas Tanner</td>
<td>Empirical research</td>
<td>2010</td>
</tr>
<tr>
<td>Progress Evaluation of the UNICEF Education in Emergencies Post-Crisis Transition Programme: the Philippines Case Study</td>
<td>UNICEF</td>
<td>Programme evaluation</td>
<td>2011</td>
</tr>
<tr>
<td>Child-led Disaster Risk Reduction: A practical guide</td>
<td>Save the Children</td>
<td>Anecdotal – Stories</td>
<td>2007</td>
</tr>
<tr>
<td>Children’s Action for Disaster Risk Reduction. Views from Children in Asia</td>
<td>UNISDR, Plan International</td>
<td>Anecdotal - Stories</td>
<td>2012</td>
</tr>
<tr>
<td>Integrating knowledge and actions in disaster risk reduction: the contribution of participatory mapping</td>
<td>Jake Rom D Cadag, JC Gaillard</td>
<td>Qualitative - Case study</td>
<td>2012</td>
</tr>
<tr>
<td>Towards the resilient future children want: a review of progress in achieving the Children’s Charter for Disaster Risk Reduction</td>
<td>Emily Bild and Maggie Ibrahim</td>
<td>Qualitative - Case studies and questionnaire</td>
<td>2013</td>
</tr>
<tr>
<td>Disaster Risk Reduction in The Education Sector – Save The Children’s Experience in Asia</td>
<td>Save the Children</td>
<td>Anecdotal</td>
<td>2016</td>
</tr>
</tbody>
</table>
The studies comprise a variety of CCDRR activities in the Philippines, from conventional DRR training, risk mappings, and vulnerability assessment, to more creative initiatives such as video training, theatre, seed grants to children’s groups to encourage DRR projects, and participatory mapping. Across these activities, six studies explicitly referred to an increase in children’s knowledge and skills, portraying them as “analyzers of risk and risk reduction activities” (Tanner et al. 2009). One study showed that thanks to the drills, children were able to guide their parents on what to do when the ensuing earthquake struck (Save the Children 2007). In addition to the capacity change, some studies found that children that had been part of DRR activities were more prone to become active citizens and lead advocacy campaigns or raise awareness within their communities. Some examples are the advocacy videos created by children against mining in Eastern Samar (Back et al. 2009), the awareness-raising campaigns led by DRR ambassadors in Cebu (Bild and Ibrahim 2013), the student-led relocation of a school following a risk assessment in Southern Leyte (Back et al. 2009) and the plantation of trees to restore the mangroves (Plan International 2010). None of the studies reported a well-being change related to sustained risk reduction and resilience-building.

Although these studies from the Philippines seem to indicate a positive impact of CCDRR interventions in increasing children’s capacity and citizenship skills, in most cases such findings are derived from case studies and anecdotal studies, which might not suffice to conclude that such one-to-one association exists. Most of the studies fail to include a control group or pre-/post-intervention assessment to assess the real impact of the intervention. In order to establish clear links, future research efforts should consider more robust methods. Beyond the methods, the studies also have other shortcomings. For instance, they fail to assess the effect in the household
or the different impact that the interventions might have in different groups of youth (i.e. vulnerable groups). In relation to the latter, the only reference to intragroup diversity is related to different risk perceptions based on gender. Though some studies briefly refer to a specific effort to reach out-of-school children, future research requires a more detailed examination of this issue. Another important aspect relates to the longer-term effects of these interventions. Most studies assess the gain in knowledge of skills immediately after the intervention but fail to measure the broader impact it might have in increasing resilience over time.

Conclusion

After examining the studies conducted in the Philippines, it becomes evident that there is a significant gap in evidence for CCDRR. Despite the fact that there are several interventions solely focused on CCDRR in the Philippines, the hard evidence available for their effectiveness is scarce. Most of the results are anecdotal or collected through questionnaires handed to children and, therefore, subject to biases. Also, current measurements are too short-term oriented, they demonstrate the direct impact of the interventions but fail to account for their broader contribution to resilience-building. A longer-term perspective with a stronger focus on resilience needs to be incorporated into evaluations to ensure that CCDRR is effectively contributing to resilience-building.

Disregarding the studies’ methodologies and focusing on the seemingly positive impact of CCDRR interventions, the challenge remains to the ability of NGOs’, UN agencies and civil society to scale up such initiatives. In this regard, further collaboration with the government should
be sought to ensure that these interventions are not anecdotal but rather part of a structured approach to DRR. Prior to advocating for government’s support, agencies should invest in research to understand what factors are behind interventions’ effectiveness to inform future interventions.

This review concludes that it is critical to increase the evidence base available for interventions in low- and lower middle-income in disaster-prone areas. As the initial review indicated, existing research on CCDRR activities does not distinguish between developed and developing countries despite the substantial data that indicates the broader economic and human losses in the latter. Considering these data points and the fact that developing countries do not have the same resources to invest in DRR, a strong case exists for investing in quality research to inform interventions in such contexts.
Bibliography


“From Catastrophe to Opportunity: Children in Asia creating positive social changes after disasters” Plan International, 2008.


Hore, Katherine, Gaillard, JC, Johnston, David, Ronan, Kevin. “Child-centred disaster risk reduction” 2018, Global Alliance for Disaster Risk Reduction in the Education Sector


