A QUALITATIVE NARRATIVE SYNTHESIS ON THE BEST COMMUNITY ORGANIZING PRACTICES IN DISASTER RISK REDUCTION AND MANAGEMENT IN HEALTH (DRRM-H) IN THE PHILIPPINES

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Abstract

Since governments are unable to handle risk reduction on their own, the trend surrounding DRRM-H shifted from relief and reaction to using a community-based approach (Azad, 2019; Iuchi et al, 2019) — and this includes community organizing (CO). With the advent of DRRM-H initiatives in the Philippines, the need exists to investigate and identify what the best CO practices are, in the context of DRRM-H. The research qualitatively analyzed data in this scoping review, and consistent with PRISMA guidelines. The study used open and axial analysis as its primary qualitative analysis method. With search terms among the search engines, 740 articles were found, but only 12 articles were included. Most of the best CO practices in DRRM-H revolve around "all-inclusivity". Best CO practices tend to widen its clientele level and population reach and/or require multi-sectoral, multi-population-level stakeholder consultation and analysis as a way of increasing the policy guarantee and program reach.

Keywords*: disaster risk reduction and management in health, community organizing, health promotion, health emergencies, health technology.*

Introduction

It is regarded that governments are unable to handle risk reduction on their own, therefore, the trend surrounding disaster risk reduction and management in health (DRRM-H) shifted from relief and reaction to using a community-based approach (Azad, 2019; Iuchi et al, 2019) — and this includes community organizing (CO). According to the Sendai Framework for Disaster Risk Reduction 2015-2030 (UNDRR, 2015a), human health is at the heart of disaster risk reduction. It calls on the international community to improve local and national DRRM-H.

As of researchable data, there is still no published Philippine data on the best community organizing practices in DRRM-H in the Philippines. With more than 10 years since the performance of DRRM and DRRM-H initiatives in the country, there is now the need to look into the country's best community organizing practices in the context of DRRM-H.

The study will analyze pre-existing data on the best community organizing practices in DRRM-H. Specifically, this study will:

1. Identify the findings of all relevant individual studies on the community organizing practices in disaster risk reduction and management in health in the Philippines
2. Discuss the best community organizing practices in DRRM-H and its implications to national and local policies in the Philippines.

This study aims to answer the research question, What are the best community organizing practices in DRRM-H in the Philippines?

As the importance of CO is being emphasized in DRRM-H, it is paramount to raise the awareness and involvement of community members. CO allows communities to experience developing their own solutions rather than relying on already overburdened governments and non-governmental organizations. Lastly, this study aims to help inform and guide policymakers towards a more effective implementation of DRRM-H policies.

Theoretical Background

The DRRM-H-related policies from the pre-Commonwealth days until the present do not include specific provisions for community organizing. The Philippine government has devised a plan to mitigate the impact of natural and human-caused disasters. Our disaster management mechanism dates back to 1941, when President Manuel L. Quezon issued Executive Order (EO) No. 335, which established the National Emergency Commission and put in place controls and coordination measures (Commission on Audit [COA], n.d.). Then fast track to recent years, the Climate Change Act of 2009 was passed by Congress, followed by RA 10121, the Philippine Disaster Risk Reduction and Management (PDRRM) Act in 2010. These two DRRM laws have similar aims and objectives: 1) to improve the resilience of vulnerable communities and the nation against natural disasters, and 2) to minimize disaster-related harm and loss of life and property.

From disaster preparedness and response in the 1970s to disaster management in the 1980s, disaster risk management in the 1990s, and finally disaster risk reduction in 2005 and beyond, the Philippines has taken a variety of approaches in DRRM-H PPAs over the years (COA, n.d). The National Disaster Coordinating Council (NDCC) was renamed the National Disaster Risk Reduction and Management Council (NDRRMC), and it is still led by the Department of National Defense (DND). As it stands now, it includes the Secretary of the Department of Science and Technology (DOST) for disaster prevention and mitigation and the Secretary of the DILG for disaster preparedness. The council

also comprises financial institutions, local government leagues, the private sector, and civil society organizations (CSOs) in addition to government agencies, reflecting the "Whole-of-Society" approach to disaster risk mitigation (COA, 2016).

The Sendai Framework is the successor to the Hyogo Framework for Action (HFA) 2005-2015: Building Nations and Communities' Disaster Resilience. It is the result of stakeholder consultations that began in March 2012 and intergovernmental negotiations that took place from July 2014 to March 2015, with the United Nations Office for Disaster Risk Reduction (UN DRR) providing support at the request of the UN General Assembly. From these earlier frameworks, the paradigm shifted to place a greater emphasis on community resilience in the wake of a catastrophe, as well as advances in modern technology, globalization, and dramatic shifts in climate change (ADB, 2013). The government's role and contribution to the DRRM systems approach were also discussed in the framework. The framework suggests the importance of consulting the community, particularly the population minorities, to come up with better, if not best, strategic plans for DRRM.

The National Disaster Risk Reduction and Management Plan (NDRRMP) 2011-2028 is a 17-year disaster risk reduction and management plan developed in the Philippines in 2011. The Philippine Disaster Risk Reduction and Management Act of 2010 is the legal underpinning for this disaster-reduction and management plan in the Philippines (RA 10121, 2010). It is envisioned that the resilient Filipino people will be molded in this way, leading to sustainable development. RA 10121 calls for the development of policies and strategies, as well as the implementation of actions and initiatives, related to all aspects of DRRM. These aspects include good governance, risk evaluation and early warning, knowledge building and awareness raising, reducing underlying risk factors, and preparedness for successful response and early recovery. Community organizing was not specifically included but may be alluded to by the stipulations in the provisions of that law.

In addition to these national DRRM-H initiatives, the Department of Health (DOH) has released a number of health policies related to DRRM-H. For instance, in 2019, the institution issued an Administrative Order (AO) outlining a national strategy in DRRM-H in detail (DOH AO 2019-0046). The National Policy on Disaster Risk Reduction and Management in Health was created with the intention of aligning the structure and fundamental processes of Philippine DRRM-H with current national and international DRRM-H goals (AO 2019-0046, 2019). This AO was guided upon by international DRRM-H related frameworks such as the WHO EDRM framework and the Sendai Framework. Health related provisions in DRRM-H primarily included essential health service packages (EHSP) and health emergency commodities. The guiding principles of AO 2019-0046 includes the application of the whole-of-society and whole-of-government approach which aims to encourage community participation and to foster partnerships between different stakeholders.

Other DRRM-H policies by the DOH included the following: the DOH Administrative Order 2016-0005, or the National Policy on the Minimum Initial Service Package for Sexual and Reproductive Health (MISP- SRH) in Health Emergencies and Disasters (AO 2016-005, 2016). This is based on the Magna Carta of Women under Rule IV- Rights and Empowerment of Section 13 provides that “there should be timely, adequate, and culturally appropriate provision of comprehensive health services including the implementation of MISP-SRH at the early stage of the crises'' (RA 9710, 2009). AO 2017-0007, or the Guidelines in the Provision of the Essential Health Service Packages in Emergencies and Disasters aims to set the standards for the effective, efficient and timely delivery of the essential health services during emergencies and disasters. Gaps included in the policy were the lack of having clear policies, guidelines, and standards that caused ineffective policy implementation and weak coordinating mechanisms on DRRM. Issues identified as the basis for the creation of such AOs and the policy content themselves do not include aspects of CO.

Methods

Research Design

The research will make use of a qualitative form of research for the systematic review. As a form of study, qualitative researches gather words, sentences, and other text-based data from personal communications, literature, and group discussion (Pope and Mays, 2020; Greenhalgh et al, 2016). On the other hand, systematic / scoping review consists of a series of logical steps which aims to collate available data from a focused number of studies to answer a relatively specific research question (Munn et al, 2018). This study type was used because it provides context on which community organizing interventions derived from both quantitative and other qualitative researches will work best in the current Philippine setting. Description and systematic analyses of complex relationships among these health interventions, socio-cultural-political phenomena, and the environment are included therein.

Lastly, this study employs a qualitative narrative synthesis method. This design allows for the clustering of scoped studies into homogenous groups (Page & Thomas, 2009). Similarities in content and thought are qualitatively identified and analyzed.

Data Gathering

Search indices used for the study are Google Scholar, PubMed, and Science Direct. The study used PRISMA, a form of research workflow that allows for an initial systematic appraising of literature possibly related to the research question through the PRISMA checklist (Holly, Salmond, and Saibert, 2012). From the search indices, pre-determined keywords were used to review possible related articles. A data summarizing tool was used for each phase of textual analysis in the PRISMA workflow. Article duplicates were removed by a function

available in Microsoft Excel. Thereafter, a review of all article titles was performed as part of an initial assessment. Once articles have been limited by their titles, abstract and full-text analysis was performed to further limit the number of actual and relevant studies included for this research.

Inclusion Criteria

1. Research articles must be published in either Google Scholar, PubMed, or ScienceDirect.
2. Research articles must be published from January 1, 2010, to May 31, 2021, only.
3. Studies must contain terms or concepts related the following: (1) community organizing practices, (2) Disaster Risk Reduction and Management in Health
4. Study should contain practices relevant to the terms in the context of the Philippines, although there is no limit as to where the study was published
5. Articles must be published either in Filipino or English.

Exclusion Criteria

1. sourced from other research-indexing websites
2. published before January 1, 2010, and after May 31, 2021
3. references coming from unpublished articles, books, book chapters, editorials, news articles, and reports

Data Analysis

In terms of data analysis, the study used thematic analysis *(specifically open and axial analysis)* as its primary qualitative analysis method. Under this form of analysis, open and axial analysis was performed. Open analysis transforms raw data to open codes and axial analysis clusters these open codes into axial themes (Neuman, 2013). Due to uncertain predictability of common community organizing interventions in DRRM-H in the Philippines, the researchers did not use any preset codes for this study. Instead, raw data (i.e., words, sentences, or phrases from included literature) was identified and transformed into open codes. These open codes were clustered relative to their possible logical inter-relationships. Clustered open codes yielded axial themes. These axial themes, discussed and identified by the researchers, were analyzed and interpreted for their relevance towards the best community organizing practices in DRRM-H. As a way of counter-checking the validity and reliability of identified themes, concepts reflected by the themes were compared with identified open codes and were assessed for validity and reliability.

Results and Discussion

Data Gathering

With the initial search terms used across the three scholarly search engines, 740 articles were found – 615 articles from Google Scholar, 124 from PubMed, and 1 from Science Direct. From duplicate removal to titular analysis to full-text analysis, only 12 articles were included (refer to Figure 1 for the full PRISMA Diagram of the study).

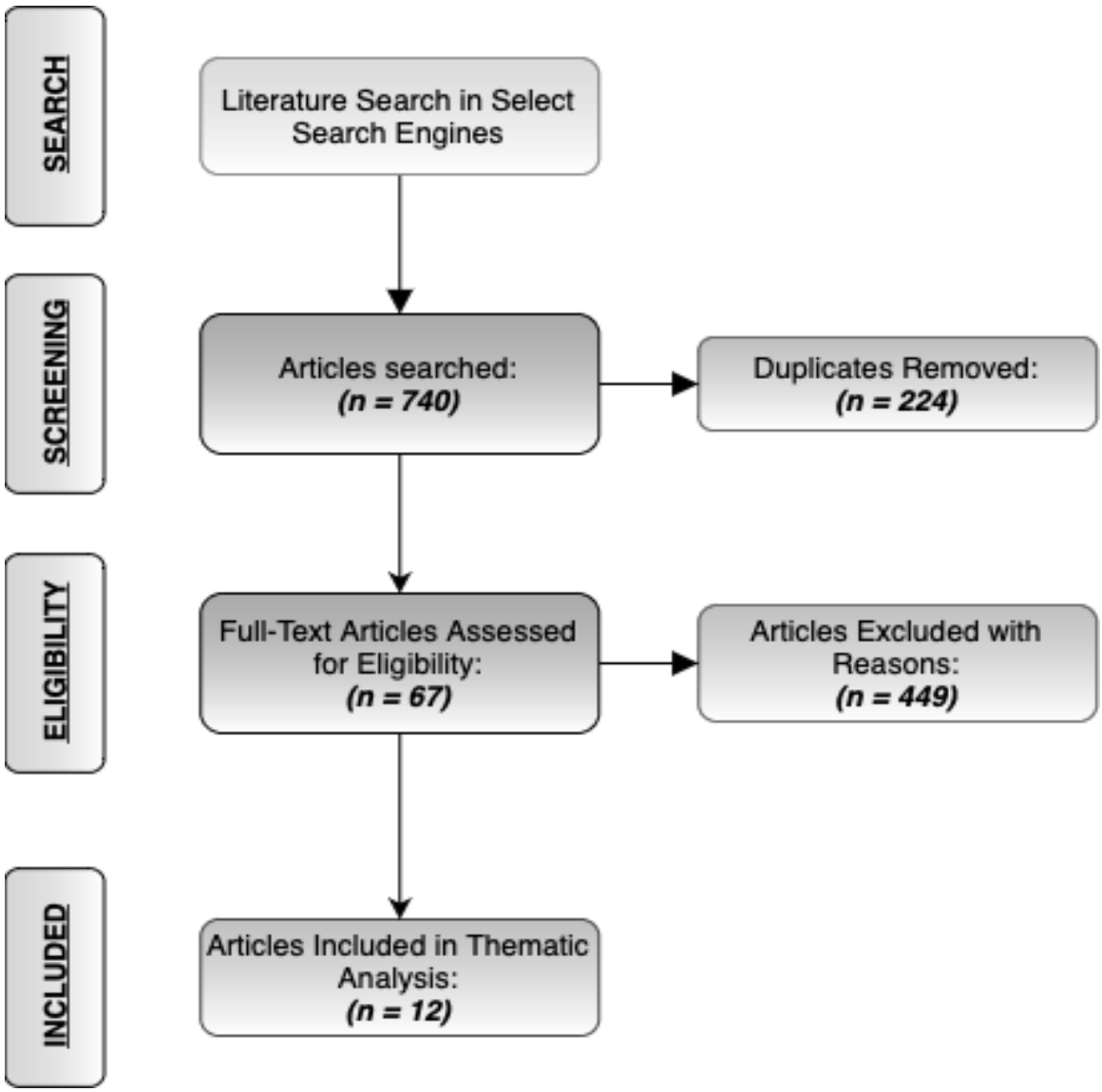

Figure 1. PRISMA Workflow

Data Analysis

For the open analysis, 31 codes were identified. These were coded based on the raw data coming from the 12 articles assessed. Some codes were repeated as the content of certain raw data from various sources were identified. These codes were then clustered to form 12 different themes. To ensure the relevance of the themes, these were compared to the raw data for content validation. After

content validation, only five themes emerged as relevant to best community organizing practices in DRRM-H (see figure 2 and table 2).

Table 2. Final List of Axial Themes

Axial Themes	**Description**
Community-Based Utilization of DRRM-H technologies	Use of different innovations and technologies within the community for DRRM-H programs
Mental Health in DRRM-H and Community Organizing	Inclusion of mental and psychosocial support for community members in planning DRRM-H programs
Multi-level Capacity-Building in DRRM-H	Building capacity among different stakeholders to ensure sustainability of DRRM-H programs
Participatory Approach in DRRM-H	Engagement of community members in decision-making and other parts of DRRM-H program planning
Holistic DRRM-H strategies and Mechanisms	Application of broad DRRM-H strategies in consideration to the social determinants and the whole well-being of community members

Community-Based Utilization of DRRM-H Technologies

In various references, the use of DRRM-H related technologies which can be easily accessed and inclusive among all populations. It can be noted that in Albay, early warning systems regarding floods were not just installed throughout the whole scope of the province, but the government also provided training to the population and the LGU on how to use it (Pongan, 2015). Involving various sectors of the population increases community compliance to DRRM-H policies and community resilience.

Furthermore, mitigation of DRRM-H-related health risks can be significantly mitigated when these risks are identified prior to the onset of a disaster – and this can be done through the appropriate use of information and topographical technologies. DRRM-H implementers in Albay used Google-based mapping services and included the insights of its community members to determine which areas in Albay were particularly at a higher risk of causing physical and economic harm to the community members.

Rushing, Solomon, and Cooper (2020), Craig et al (2019), and Benigno et al (2015) further posits that DRRM-related technologies, as part of DRRM-H planning, should be disability-inclusive. Local implementers of DRRM-H will be able to know how to use these technologies and use universal design principles for increased community utilization of DRRM-H technologies.

Lastly, with the need for DRRM-H technologies comes a greater need for funding allocation for DRRM-H. Despite having the knowledge, skills, and attitudes towards the use of DRRM-H technologies, community access to these cannot be achieved without adequate government financial support (Carcellar, et al, 2011).

Mental Health in DRRM-H and Community Organizing

Disasters, wars, and disease outbreaks are well-known to cause psychopathologies to members of the community (Goldmann & Galea, 2014). People are less likely to forget the consequences of these DRRM-H-related events and may cause them to have signs and symptoms of post-traumatic stress disorder (PTSD), a common psychopathology seen post-disasters, wars, and disease outbreaks. The WHO, War Trauma Foundation, and the World Vision (2011) recognizes that there is a need to address PTSD prior to, during, and post-DRRM-H-related events and that training of field health workers on psychological first aid measures to reduce its occurrence is imperative.

When mental health is integrated as part of the community organizing process for DRRM-H, it tends to have significantly less impact on the quality of life of people post-disaster. This integration can be done throughout all of the phases of DRRM-H. Arroyo and Åstrand (2019) noted that the use of training for skills that promote mental health (e.g., self-awareness seminars, self-construction skills programs, painting, etc.) enhanced the people's capacity to perform collective decision and collective action towards community resilience.

Moreover, community discussions of the experiences of each community member can provide community catharsis and can guide future DRRM-H-related decisions. People from Barangay Parian in Laguna expressed that their residents' experiences, through community discussions, served as "real-life teachers" on DRRM-H-related events, allowed them to have increased empathy with one another, and enabled the community to have a perceived increase in community resilience (Javier, 2019). Lessons from each member of the community increased community salience to DRRM-H initiatives.

Multi-level Capacity-Building in DRRM-H

Capacity-Building, as a major part of community organizing, allows the people to have increased knowledge, skills, attitudes towards positive health outcomes. To achieve these positive health outcomes, DRRM-H capacity-building activities in the Philippines are targeted towards many relevant clientele and stakeholders in the community, regardless of the level – i.e., individuals, families, population groups. Mendoza, Toledo-Bruno, and Olpeda (2016) and Toledo, Tantoy, and Paraiso (2020) described the approaches that increased disaster resilience in LGUs and/or LGU-controlled institutions.

They described training as being directed not only on the LGUs, but also in its various sub-institutions that cater to the needs of various population groups. They further included that these trainings were designed in such a way the community's traditions, beliefs, and indigenous practices were considered –

another indication of increased inclusivity in community organizing. Training on first aid and the implementation of RA 10121 were performed among DRRM-H implementers and LGU officials. Disaster preparedness drills were initiated among schools to increase the adaptive capacity of the students and DRRM-H leadership of school personnel. Magno (2014) also emphasized that community-based training on DRRM-H increased the salience and participation of the community members and volunteers towards disaster risk mitigation associated with riverbank erosion.

Activities on capacity-building do not only revolve around the actual implementation of DRRM-H PPAs – it can also be directed towards leadership in DRRM-H. Geges and Faulmino (2017) emphasized that, when community leaders are trained on leadership and management related to DRRM-H, they would have an increased sense of ownership among projects related to DRRM-H – which in turn leads to increased sustainability of DRRM-H PPAs. They further added that providing DRRM-H leadership and management training among people with "leadership potential" may improve the community's capacity towards self-reliance in the context of DRRM-H.

Participatory Approach in DRRM-H

In various frameworks of DRRM and DRRM-H, it was often emphasized that there is a need to create policies, programs, and activities in all phases of DRRM / DRRM-H and that a list of characteristics must be observed. However, aside from the Dhaka Declaration for Disability and Disaster Risk Management, there is no specific mention on these frameworks of how exactly communities can be engaged with and provide inputs in the way DRRM and DRRM-H Policies, Plans, and Activities (PPAs) are created, implemented, and evaluated.

In the Dhaka Declaration, a participatory approach in disability-inclusive DRRM can be inferred based on some of its specific action points. It advocates for community-based risk assessments, people-centered and disability-inclusive early warning systems, and self-reliance of persons with disabilities towards the removal of barriers to better health outcomes associated with DRRM-H (UNDRR, 2015).

On the ground, this participatory approach in DRRM-H can be performed by appropriate stakeholder consultation for DRRM-H PPAs, and collaborative engagements of the community with local and international government and non-government agencies. These all contribute to a whole-of-society and a whole-of government approach in community organizing in the context of DRRM-H.

In Albay, dialogues are being conducted by the local government unit (LGU) with the various sectors of their jurisdiction as part of DRRM-H planning (Arao, 2020; Pongan et al, 2015). It allowed the LGU to identify priority needs of the community with regards to DRRM-H PPAs. Community knowledge of DRRM-H needs of persons with disabilities in Region VIII increased upon the conduct of needs assessment of persons with disabilities on DRRM-H. Benigno et al (2015) further added that this demonstrates how participatory approach and disability-

inclusive knowledge enhancement schemes are critical in increasing community salience of disability needs in DRRM-H.

Holistic DRRM-H Strategies/ Mechanisms

Community-based health care, in which DRRM-H is a part of, is argued to be holistic in that it views that the act of providing health services should address the service target as a whole and/or totality and not merely a sum of its parts (Frisch and Rabinowitsch, 2019; McMillan, et al, 2018; Berman et al, 2016). In the context of DRRM-H, PPAs should be created addressing not only health problems; but also, related risk factors predisposing, reinforcing, and enabling people to health problems in disasters, wars, and disease outbreaks. These risk factors include the social determinants of health – i.e., access to quality education, economic and financial stability, built environments and neighborhoods, social risk protection, food security, employment, among others (WHO, n.d.).

Arroyo and Åstrand (2019) observed that Gawad Kalinga coordinated with its local and international linkages with the private sector and created a DRRM-H program directed towards the livelihood of fishermen post-disaster. Geges and Faulmino (2017) noted that food preparation served as a sustainable livelihood opportunity among the community residents in Javier, Leyte. With government institutions, non-government agencies, and the community itself collaborating to create a program that targets the livelihood needs of the community members, residents are more likely to have sustainable jobs to provide for their financial needs.

Another finding related to holistic DRRM-H needs is the inclusion of a school-based DRRM-H instruction in "School Improvement Plan and Action Plan" of schools in Barangay Parian, Calamba, Laguna (Javier, 2019). City-wide capacity-building programs were provided to the potential implementers of this school-based DRRM-H instruction and school leaders, in coordination with the Department of Education. When all these non-medical risk factors are addressed and the community's holistic needs are met, they would have (1) better food security, (2) greater access to health services, (3) increased capacity to participate in the creation, implementation, and evaluation of DRRM-H PPAs.

Conclusions

Implications

Most of the best community organizing practices related to DRRM-H revolve around the idea of "all-inclusivity". The best community organizing approaches to DRRM-H attempted to widen its clientele level and population reach and/or required multi-sectoral, multi-population-level stakeholder consultation and analysis as a way of increasing the policy guarantee and program reach.

Limitations

The articles in this study are only limited to community organizing practices done in the Philippines in the context of DRRM-H. This review covers only published articles from January 1, 2010 to May 31, 2021. Documents sourced from other research-indexing websites, those published before January 1, 2010 and after May 31, 2021, those coming from unpublished articles, books, book chapters, editorials, news articles, and reports. While this policy paper seeks to help inform policy decisions for efficient DRRM-H implementation, the study relies only on secondary data, and does not directly assess program implementation in the grassroots. As such, the results stated herein may not be exactly reflective of what is happening on the ground.

Recommendations

Based on the best practices identified, it is recommended that 1) consideration of government agencies to invest in DRRM-H technologies to provide efficient and effective disaster risk response; 2) inclusion of mental health related-programs in the DRRM-H plans; 3) inclusion of a multi-level capacity building among communities and stakeholders to strengthen capacity and preparedness to disasters; 4) application of whole-of-society and a whole-of government approach in community organizing in the context of DRRM-H; and lastly, 5) inclusion of a holistic DRRM-H mechanisms in the DRRM-H plans to ensure community salience.

Declaration of Conflict of Interest

We declare no conflict of interest in the conduct of our study.

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APPENDIX A. LIST OF ACRONYMS

AO	Administrative Order
CBDM	Community-Based Disaster Management
CO	Community Organizing
CSO	Civil Society Organizations
DND	Department of National Defense
DILG	Department of the Interior and Local Government
DOH	Department of Health
DRR	Disaster Risk Reduction
DRRM	Disaster Risk Reduction and Management
DRRM-H	Disaster Risk Reduction and Management in Health
DOST	Department of Science and Technology
EDRM	Emergencies and disaster risk management
EHSP	Essential Health Service Packages
EO	Executive Order
HFA	Hyogo Framework for Action
LGU	Local Government Unit
MISP-SRH	Minimum Initial Service Package for Sexual and Reproductive Health
NDCC	National Disaster Coordinating Council
NDRRMC	National Disaster Risk Reduction & Management Council
NDRRMP	National Disaster Risk Reduction and Management Plan
UNDP	United Nations Development Programme
PPA	Policies, Programs and Activities
PDRRM	Philippine Disaster Risk Reduction and Management
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
UNDRR	United Nations Office for Disaster Risk Reduction
VIO	Volunteer Involving Organizations

APPENDIX B. STEP-BY-STEP PROCESS OF DATA GATHERING

Method: PRISMA / Thematic Analysis (Open and Axial)	
STEP 1:	Review of Community Organizing Work in the Philippines
STEP 2:	Identify keywords: Disaster Risk Reduction and Management in Health OR: - Health Emergencies - Disaster Risk Reduction AND Community Organizing Practices OR: - Community Organization Practices - Community Organizing - Community Organization AND [Key Area] Philippines
STEP 3:	Identify search engines (Google Scholar, PubMed, ScienceDirect)
STEP 4:	Search keywords on the search engines
STEP 5:	Deletion of duplicates
STEP 6:	Obtain Final List of Literatures
STEP 7:	Perform Title Analysis, Abstract Analysis, and Full Text Analysis
STEP 8:	Obtain a Final List of Literatures for the Thematic Analysis
STEP 9:	Perform PRISMA / Thematic Analysis (Open and Axial Analysis)
STEP 10:	Generating Themes and Reviewing Themes
STEP 11:	Analysis of themes