Review Paper: The Resilient Child Indicators in Natural Disasters: A Systematic Review Protocol

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ABSTRACT

Annually, children as a major group are affected in disasters worldwide. Resilience terminology is appeared in disaster risk reduction to improve more attention paid on human ability instead of concentration on his vulnerability. It seems that child resiliency may be the best approach to decrease the vulnerability. Although there are lots of studies on resiliency, children resiliency in disasters seems to be a unique field to consider. The current systematic review aimed at synthesizing the evidence of the children resiliency indicators in natural disasters to identify their capacity and improve their ability against the disaster consequences. The current systematic review was conducted on the children resiliency in articles regarding natural disaster situation that extracted indicators/factors to improve children resiliency in natural disasters. Four main electronic databases which cover such articles were searched including PubMed, Scopus, Web of Science, and Pycinfo. Furthermore, experts were asked to identify verifiable grey literatures. EndNote software version X7 was used to manage searching the databases, screening duplications, and extracting irrelevant articles. Search strategy was defined by the current review authors. Specific syntax was used for each main database. A period was considered to search the databases. The evaluation of the articles was conducted based on PICO defined according to the research question to include and exclude the articles. Moreover, the qualitative assessment and review instrument (QARI) checklist from JBI (Joanna Briggs Institute Reviewers' Manual: 2014 edition) was used to assess the quality criteria. It is a quality context focused on human psychosocial behavior with specific group called children, adolescents, teenagers, and youths, but the current systematic review called them under eighteen-year-old children according to the definition of the United Nations International Children's Emergency Fund (UNICEF). On the other hand, the QARI data extraction instrument was also used according to the research question.

The current systematic literature review determined the tangible criteria of child resiliency was valuable for decision makers, community, researchers, families, and the people concerned about children and also disaster situations. In this way, in disaster situations they could evaluate the difference between resilient children vs. non-resilient ones; the impacts are limited to the disaster, but also long-time after the disaster.

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1. Introduction

Risk, disaster, emergency and risk of natural, health, environmental, and terrorist hazards are increasing in the word [1]. The children of the word are regularly exposed to environmental hazards, both natural and manmade disasters. In the previous 2 decades more than 100 million children were affected by hazards. [2] According to united nations international children's emergency fund (UNICEF) (2013), the number of under 18 years affected children increases up to 2.5 billion by 2050 [3]. On the other hand, the increasing trend of risks and hazards in recent years led the policy makers and researchers to resilience and Disaster Risk Reduction (DRR) concepts to reduce disaster risks that this new approach is on the positive side of events.

In the recent decade, UN frameworks such as Hyogo and Sendai that concentrated on DRR call the core value in resilient literature focused on children in disaster-resilient communities [4-6]. There are lots of studies on resiliency [7-14] that explain the concepts such as community, society, and individual resiliency, but studies on resilient indicators for specific groups such as children are very rare. For instance, resilience is defined as a process of successful adaptation ability in threatening situations; in other words, a positive adjustment is in response to adverse conditions. Resilience is achieved by tenacity, self-enhancement, coercive coping, positive moods, and feelings [15]. According to Tango (2012), resilience is "individual, community and institution ability to anticipate, withstand, and bounce back from external pressures and shocks in ways that avoid deepening vulnerability" [4]. Children are important groups that should be considered in disasters due to their vulnerability and special potential ability to contribute in disaster risk reduction programs. It is noteworthy that children can create safety and prevention culture in society [16].

Although resiliency has 2 sides, vulnerability and capacity, it seems that most of the scientists focus on vulnerability instead of capacity, similar to most studies [17-22]. As capacity issue is rarely studied, the current study aimed at investigating it. The current meanings of resilience are general issues that are not clear to be managed and find out main factors to improve children resiliency. Therefore, the meanings should undergo a concept analysis to define clear indicators understandable to decision makers in disasters.

As there was no systematic review of child resiliency in natural disasters, the current study aimed at examining the studies on this topic. Therefore, the main objective was extracting tangible criteria to show up children resiliency in natural disasters. Generally, the current study findings clarify the future studies on children in disaster situation, which are worth to follow-up both by researchers and policy makers. Due to the importance of child resiliency as a vulnerable group, not highlighted in literatures, the current study aimed to do it.

2. Materials and Methods

Study design

The current study conducted a systematic review on children resiliency in natural disaster situation in any mythological articles that extracted indicators/factors to improve children resiliency in natural disasters. Four main electronic databases which cover the articles on this topic were searched: PubMed, Scopus, Web of Science, and PsycInfo. Furthermore, experts were asked to identify verifiable grey literatures. EndNote software version X7 was used to manage search library, screen duplications, and extract irrelevant articles. Search strategy was defined by the authors. Specific syntax was used for each main database. Time limits were considered for database searching. Articles were evaluated based on PICO defined according to the research question to include and exclude the articles. Moreover, the qualitative assessment and review instrument (QARI) checklist/tool from JBI (Joanna Briggs Institute Reviewers' Manual: 2014 edition) was used to assess criteria quality. It was a quality context and focused on human psychosocial behaviors on a specific group called children, adolescence, teenager, and youths; but the current study called them under 18-year-old children, according UNICEF definition. On the other hand, the current study used the QARI data extraction tool according to the research question. Systematic literature reviews in English and without any restrictions of articles` methodology were included in the review. The designee will be followed base on the PRISMA statement diagram [23]. PRISMA-P checklist was employed to assess the eligibility of the included articles. Nowadays, due to the lack of protocol guidance, researchers use PRISMA-P [24]. This checklist evaluates three main sections of articles such as administrative information, introduction, and methods [24].

Study registration

The current systematic review was registered with PROSPERO (registration number: CRD42016047232; http://www.crd.york.ac.uk/PROSPERO/)

Inclusion and exclusion criteria

To answer the review question- the child resilience dilemmas and indicators in natural disasters- the studies on 3 main keywords (resiliency, children and natural disaster) were selected. All articles on children resiliency were considered disregarding the methodology, date, and language limitations. It means that studies in English with all types of methodologies were included in the current systematic review that most of them had good quality. Researchers intended to respond to the review question on child resilience with respect to psychosocial, physical, and environmental approach in natural disaster realm. Furthermore, all researches conducted in the realm of natural disaster were included and all manmade disasters and any kind of emergencies or clinical studies were excluded.

Population criteria

The current review specifically focused on 6- to 18-year-old children.

Type of interventions

Any program or indicator that described resiliency in children in natural disaster situation as an eligible intervention was included in the current review. Furthermore, all suggestion to improve child resiliency were considered, too. Resiliency has diversity domain; therefore, mental health and psychological aspects are important and social, cultural, and environmental indicators are included. The study restricted the inclusion documents only to "natural disaster". The documents should describe children resiliency as a theoretical or scientific description to define eligible criteria to improve children resiliency in disaster situations.

Data collection

Search methods to identify studies or search strategy

The search process utilized in the current review consisted of 3 steps by JBI's CReMS [25] standard. First of all, computerized databases were searched without any date and language restriction. The keywords were selected according to Mesh entry, expert opinion, and similar study keywords. Scopus, Web of Science, Medline, and PsycInfo were used as databases. In addition, search strategy for each database was defined by expert panel team. The search terms and strategies were as follows: [(Resilient* and (Child* or youth or adolescent* or young or teen*) and disaster, title, abstract, head words, table of contents, key concepts, original title, tests, and measures]. Then,

special databases and grey literatures were also searched through global platform for DDR, ERIC, fosteringresilience.com, and 6th international building resilience conference. Moreover, covering adhesion searched these websites - unicef/prevention web/unisdr/mhpss - were followed to extract data according to foreign expert suggestions by face-to-face interview at international conferences, emails, and also Skype interviews. Finally, the reference list of all identified reports and articles were checked to evaluate any missing additional studies.

3. Results

Selection of studies

All search results were transferred into EndNote software. First of all, duplication documents were deleted. Then, data evaluation was start by title, abstract, and keywords by inclusion criteria. Full texts of the remained articles were searched. The full-texts were screened with the inclusion and exclusion criteria and also standard quality assessment [23-25] was conducted. Two authors assessed eligibility, independently. In case of any disagreements between the 2 reviewers, the 3rd author resolved the case.

Data extraction

The search terms for each database were defined according to the research questions and several peer-review discussions. The syntax of keywords was employed based on the number of non-replicated (NNR) index. (LM carried out the initial search of studies using the databases listed above in cooperation with DKZ as the supervisor. Titles and abstracts were independently screened for inclusion in the systematic review and discrepancies by 2 researchers. LM screened and coded the full publications and excluded any articles that did not meet the inclusion criteria and discrepancies were resolved by discussion.

Risk of bias assessment

Quality assessment of the selected studies was carried out by the QARI checklist based on JBI [25] recommended by Cochrane group. Quality assessment was conducted by 2 authors and studies were selected accordingly.

4. Discussion

Data synthesis and analysis

Contextual analysis was used for the collected data. It was predicted to do subgroup or subset analysis in 2 resilient domains such as physical, psychosocial, etc.;

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Although it was dynamic through the processes. Finally, holistic definition of children resiliency in disaster context was described in psychology context in addition to the other context.

5. Conclusion

A new prospect of children resilience in disaster was provided and its terminology in disaster context was defined with multiple dimensions and also the tangible indicators of children resiliency were extracted for disaster managers and policy makers to consider before and after disaster planning. Therefore, it had primary and secondary outcomes such as: paying attention to children in disaster situations and defining the resilience dilemma for children in disaster situations. It clarified the diagnostic tangible indicators of resiliency of children spatial for disaster situation and clear factors for policy makers and disaster managers about children.

Limitation

The main limitation was authors` lack of access to the main famous and essential databases due to the economic sanctions against the country. It took a long time to receive open access through the 1st author`s close friend who lived abroad.

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Conflict of Interest

The authors declared no conflict of interests.

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