

**Resilience in Children in the Aftermath of Disasters: A Systematic Review and a New
Perspective on Individual, Interpersonal, Group, and Intergroup Level Factors**

Alessia Cadamuro^a, Michèle D. Birtel^b, Gian Antonio Di Bernardo^c, Eleonora Crapolicchio^d, Loris
Vezzali^e, John Drury^f

^aUniversity of Modena and Reggio Emilia, Department of Biomedical, Metabolic and Neural
Science

^bUniversity of Greenwich, Department of Psychology, Social Work and Counselling

^cUniversity of Modena and Reggio Emilia, Department of Education and Humanities

^dUniversity of Sacred Heart of Milan, Department of Psychology

^eUniversity of Modena and Reggio Emilia, Faculty of Medicine

^fUniversity of Sussex, School of Psychology

Author Note

Correspondence concerning this article should be addressed to Alessia Cadamuro,
University of Modena and Reggio Emilia, viale Allegrì 9, 42121, Reggio Emilia, Italy. Email:
alessia.cadamuro@unimore.it.

Resilience in Children in the Aftermath of Disasters: A Systematic Review and a New Perspective on Individual, Interpersonal, Group, and Intergroup Level Factors

Abstract

Disasters can impact upon individuals, families, and communities in multiple ways. Research has mainly focused on risk and protective factors relating to the child (individual level) and the family (interpersonal level), not taking into account the processes at the level of social groups. The present review aims to (a) review psychological research on disasters determined by natural events in childhood, (b) distinguish individual, interpersonal, group, and intergroup levels, (c) emphasize the importance of considering resilience as a key outcome.

We reviewed 294 studies (in addition to 28 reviews-meta-analyses, and 29 naturalistic interventions), and identified factors at the individual (e.g., demographics, exposure, individual differences), interpersonal (e.g., parent-child relationship, family and school environment), group (e.g., social identity, group membership), and intergroup (relations between different groups) levels. We argue that an integrated model of these factors and their interplay is needed to design interventions to enhance resilience in children and their communities. We extend previous theorizations by providing a wider conceptualization of distress and resilience, and by considering the interplay between factors at different levels. A multidimensional approach to the consequences of disasters in children is crucial to understand their development and well-being, and to design effective interventions.

Keywords: disasters; children; PTSD; social identity; resilience; distress

Disasters, which occur almost every day all over the world, can take many forms such as earthquakes, floods, or tsunamis. They affect many people simultaneously and cause detrimental psychological consequences such as distress, behavioral problems and, for a minority, trauma (Masten & Osofsky, 2010; Wolmer, Laor, & Yazgan, 2003). The impact of a disaster cannot be defined by the magnitude of the disruption alone: its consequences are dependent upon the interplay of the hazard and the context (social, economic and political processes) which define the vulnerability of a community (Tanner & Seballos, 2012).

It is estimated that 11% of individuals have been exposed to a disaster before 16 years of age (Copeland, Keeler, Angold, & Costello, 2007). This is particularly worrying, because children may find threatening events especially distressing due to the challenge of dealing with rapid emotional and psychological development, fewer coping resources, and high dependence on caregivers for protection (Baggerly & Exum, 2008; De Young, Kenardy, & Cobham, 2011).

Many psychiatric and somatic symptoms have been reported in children following traumatic events (Drury, Scheeringa, & Zeanah, 2008; Farooqui et al., 2017), including the development of post-traumatic stress disorder (PTSD) symptoms (Bokszczanin, 2007), post-traumatic stress symptoms (PTSS) (Furr, Comer, Edmunds, & Kendall, 2010), depressive reactions (La Greca, Silverman, & Wasserstein, 1998; Tang, Liu, Liu, Xue C., & Zhang, 2014), separation and generalized anxiety (Costa, Weems, & Pina, 2009), externalizing behavior problems (De Young et al., 2011), and general impaired quality of life (e.g., Copeland et al, 2007). These symptoms may persist over time (La Greca, Silverman, Lai, & Jaccard 2010; Lai, La Greca, Auslander, & Short, 2013) and interfere with children's functioning in different domains (Samuelson, Krueger, Burnett, & Wilson, 2009; Schoeman, Carey, & Seedat, 2009).

Children's vulnerabilities have been described as a function of interacting factors, such as age, gender, geographical location, exposure, family characteristics, ethnicity, socio-economic status, disability, health status, and social networks (Gordon-Hollingsworth, Yao, Chen, Qian, & Chen, 2015; Peek, 2008). The ability of a child to react positively depends on internal factors, but also on how much the adult world is able to accompany them in the traumatic experience and the extent to which this experience is managed and elaborated by the adults themselves. For this reason, parental and, more in general, social support could be critical protective factors and work as moderators of negative outcomes in children exposed to distressing experiences (Cheng, Liang, Zhou, Eli, & Liu, 2019; Danielson et al., 2016). We argue for the importance of identifying all the variables playing a role in children's reactions to disasters and specifically in resilience.

Typically, research on disasters has largely focused on the individual and, partly, on the interpersonal level, mostly focusing on factors relating to the child as an individual and their immediate social network, such as the family. However, what characterizes a disaster is its *collective* nature. Distress produced by disasters is distinct from distress experienced at an individual level, as it can also include factors such as discrimination against minority groups, shared and vicarious distress, and threats to the child's social identity, all of which can be fueled by the disaster and in turn exacerbate its effects. In other words, distress can also depend (at least in part) on factors related to individuals' group of belonging. As an example, highly prejudiced majority group children may be reluctant being categorized in a common group (e.g., the group of disaster survivors) including the discriminated minority outgroup, since it may threaten the need for intergroup distinctiveness (Jetten & Spears, 2003). Again, observing the others' distress,

therefore experiencing it vicariously, may add to own distress and produce a sense of helplessness which reduces the chance of recovering.

However, social identities can also act as buffers, or even as motivating factors leading to resilient responses in emergencies and disasters (Vezzali, Andrighetto, Drury, Di Bernardo, & Cadamuro, 2017). In fact, while distress because of unique personal experiences may create barriers toward the others since it concerns the individual only, distress following a disaster can be perceived as a shared experience, fostering a common response and understanding. Distress and trauma are experienced collectively (Kaniasty & Norris, 1999), and only by taking into account all the components that reciprocally interact in a community (and beyond) at the individual, interpersonal, group, and intergroup level, it is possible to understand how to build personal and collective psychosocial resilience.

Note that there is a substantial body of literature available from different disciplines that has focused on the impact of disasters, also focusing on vulnerable populations. This literature places importance on the child's socio-ecological context in determining the impact of disasters. Disasters impact upon mental and physical health in particular among children belonging to certain social groups, i.e., groups with certain demographics and social vulnerabilities such as ethnic minority status, gender, and disability (for an overview, see Peek, Abramson, Cox, Fothergill, & Tobin, 2018). Children are embedded in a social ecological system consisting of microsystem (direct relations with the family, peers, schools, institutions), mesosystem (dyadic relations between two microsystems), exosystem (indirect relations in the social system which influence the child such as media or parents' workplace), macrosystem (culture the child lives in, such as ideologies and socioeconomic status), and chronosystem (changes over time such as parent's death or disasters) (Bronfenbrenner, 1979). These factors of person, context, time and

processes interact with each other (Bronfenbrenner, 2005). In other words, existing literature from different fields recognizes the importance of factors that go beyond the individual, and highlights the relevance of the larger social context. In order to provide a systematization of these indications, our review considers studies demonstrating from a psychological point of view the impact of these different factors, differentiating them in levels (individual, interpersonal, group, and intergroup), and argues for the importance of considering their complex interplay (see Figure 1).

The present review has three aims. First, it provides a systematic review of psychological research on disasters in childhood, and specifically on disasters determined by natural events. Second, extending previous work which has mainly focused on individual-level outcomes, we distinguish between individual, interpersonal, group, and intergroup levels. We argue for an integrated model in which these levels interact in determining psychological outcomes. Third, in contrast to most previous research that has focused on negative outcomes, we argue that the final outcome of the model should be resilience. With this review, we hope to stimulate future research that examines disasters in their social context.

The Present Review

Computerized searches were conducted between 26 and 30 June 2020, by using the PsycINFO database, using the following keywords and their combinations: child*, natural disaster*, earthquake, flood, hurricane, tornado, tsunami. Studies were selected based on four inclusion criteria: (1) include children up to 12 years old in the sample (as childhood is defined to end at the age of 12; cf. Shaffer & Kipp, 2009); (2) be in English, (3) concern disasters; (4) be quantitative (since we are interested in statistical effects of identified factors, in addition to their interactions; see Table 1 in online supplemental material – OSM).

After initial article identification, the title and abstract of each article were read to determine if the article met inclusion criteria. In so doing, we generally referred to criteria provided by PRISMA guidelines for systematic reviews (Moher, Liberati, Tetzlaff, Altman, & The PRISMA Group, 2009); see Figure 1 in OSM. Each study was coded by the first author.

The literature search yielded 2,055 records. After removing duplicates, books, editorial, letters, book reviews, work written in languages other than English, sample age over 12 years, ($n = 1020$) articles were screened by title and abstract. Of these, ($n = 572$) were selected for full text review for relevance. The inconsistencies were discussed by the team of authors.

After removing articles not meeting inclusion criteria, 294 eligible articles published before 30th June 2020 were included. Studies were coded according to several characteristics, including disaster type, number, type and age of participants, country, study design, level of analysis (individual, interpersonal, and group, intergroup), variable type (independent, mediator, moderator, dependent), time-points of assessment and dependent variables. Studies coded according to these characteristics are shown in Table 1 in OSM. In addition, in order to provide a fuller picture of literature of the field, we also included two additional tables in OSM of articles/studies not included in the 294 studies reported in Table 1 in OSM: in Table 2 in OSM we report 28 reviews-meta-analyses, in Table in OSM 3 we report 29 naturalistic interventions.

Finally, we include tables in OSM taking into account specific study characteristics: type of disaster (Table 4), frequencies of study design (Table 5), level (Table 6), independent (Table 7) and dependent (Table 8) variables, and finally the geographical distribution of the studies (Table 9).

From the analysis of the selected literature, it was possible to evaluate the number of studies divided by type of disaster. As can be seen in Table 4 in OSM, the majority of the studies

examined children in the aftermath of earthquakes (126) followed by hurricanes (92) and tsunami (27), while few studies were related to cyclones, lightning-strikes, tornadoes, volcanoes and storms. These numbers could be explained by the frequency of these phenomena, or by the destructive impact that earthquakes and hurricanes have on a large part of the population (that makes them an especially interesting target of research). Given the characteristics of the territories, consistent with the type of disasters, the research was carried out mainly in the United States (41%), followed by China (17%), Turkey (6%), Japan (6%), Southeast Asia (5%), and Australia (3%) (Table 9 in OSM). It is also worth noting that most of the studies (62%) employed a cross-sectional design (Table 5 in OSM). Importantly for our purposes, most studies focused on individual-level factors (59%), whereas a lower number took into account interpersonal-level (37%) and intergroup-level factors (2%); a very small number of studies (3%) included two or more levels (Table 6 in OSM). It is also interesting to note that, although there are various relevant reviews in the field (Table 2 in OSM), these had a more narrow focus, for instance referring to one type of disaster or focusing on one specific level (e.g., individual), resulting in a smaller number of studies reviewed, while our work provides a more comprehensive overview.

After presenting the outcome variables examined by research, we will review the individual, interpersonal, group, and intergroup level factors that impact upon children. Then, we will argue for the need of a new integrated perspective that takes into account how these factors interact and can lead to resilience.

Consequences of Disasters for Children

Overall, the dependent variables most frequently investigated concern children's psychological well-being (cf. Table 8 in OSM). As also acknowledged by other reviews (Furr et

al., 2010), disasters cause psychiatric and somatic symptoms. Post-traumatic stress disorder (PTSD), one of the most studied outcomes (40%), may persist for months or years. Other consequences include major depressive disorders (15%), generalized anxiety disorders (8%), adjustment disorders (7%), post-traumatic stress symptoms (7%); internalizing/externalizing problems (5%), and different types of behavioral and emotional problems (4%).

Disasters, in addition to impacting upon relations between individuals, can also inhibit family functioning and disrupt many other aspects of life, at the level of peer groups, schools, neighborhoods, communication systems, the economy, and international relations (Masten & Obradovic 2008; Terranova, Morris, Myer, Kithakye, & Morris, 2015).

In sum, research has generally focused on consequences at the individual level, mostly related to health outcomes; less work in psychology has investigated consequences at the interpersonal and even less at the community level (including group and intergroup levels theorized in this review). Notably, these consequences were generally negative. Studies considering the group and intergroup levels sometimes find positive effects of disasters, such as increases in the desire to meet and help other survivors (Vezzali et al., 2017). We argue that future research should examine wider consequences of disasters, to investigate how they impact upon relations at the interpersonal, group, and intergroup level.

Individual Level

Research has mainly focused on individual factors as predictors of psychological outcomes, which we broadly distinguish in terms of demographic factors, level of exposure, coping, theory of mind and other individual differences (cf. Table 7 in OSM).

Demographic factors such as age and gender are amongst the most frequently investigated factors (45% and 47% respectively). Studies examining *gender* showed mixed

results: while the majority of studies revealed greater stress and depression in girls than boys (Furr et al., 2010; Kronenberg et al. 2010; Silwal, Dybdahl, Chudal, Sourander, & Lien, 2018), some found a prevalence in boys than girls (Eksi et al., 2007) and others did not reveal any gender effect (e.g., Catani, Jacob, Schauer, Kohila, & Neuner, 2008; Tao, Duan, & Shi, 2014).

Gender was also found to influence children's defensive style and coping, the availability and use of social support, and expectations for response and recovery, with girls generally reporting more self-blaming, depression and rationalization compared to boys (Han, Zhang, & Zheng, 2012).

Studies examining *age* as a predictor of trauma symptoms also showed mixed results, with some studies finding no age differences (e.g., Hensley-Maloney & Varela, 2009; Marsee, 2008; Weems et al., 2007), and others showing that older children display greater PTS than younger children (e.g., Saylor, Cowart, Lipovsky, Jackson, & Finch, 2003). However, most of the studies revealed that younger children are more at risk than older children for developing PTSD symptoms (Kronenberg et al., 2010; Osofsky, Osofsky, Kronenberg, Brennan, & Hansel, 2009).

Other demographic factors are related to *socioeconomic status and living conditions*, with individuals with lower socioeconomic status or worse living conditions more likely to develop distress (Kar et al., 2007).

Table 1 in OSM suggests that differences in context or type of disaster are not sufficient to account for inconsistencies in effects found for age and gender. Other individual variables such as levels of exposure or previous emotional difficulties, or interpersonal variables such as social support (see next section), may interact with these variables and allow a clearer understanding of the direction of the effects.

An individual predictor considered by the majority of studies (57%) is the *level of exposure* to the disaster, including objective and/or subjective elements of the child's disaster experience (Tang, Xu, Li, Lu, & Xu, 2018). Regarding objective elements, only a few studies (9% of all the studies considered) found that *proximity* to the disaster was associated with distress (Catani et al., 2010; Feo et al., 2014), while others have found limited effect for this variable (Evans, & Oehler-Stinnett, 2006). Furr and colleagues (2010) found a small to medium effect of disaster exposure on PTS in children and youth, with greater effects observed for disasters characterized by greater loss of life, perceived threat, and loss of a loved one (Usami et al., 2019). Felix et al. (2011) found no difference in PTSD rates between exposed and non-exposed samples in the aftermath of a disaster; in contrast, exposed children revealed greater major depression, social phobia, and separation anxiety.

Note that perceptions of exposure can be critically dependent on other variables, like age. For instance, older children experienced greater adversity, possibly because of greater awareness of what is happening, greater mobility, higher direct exposure to community effects and media exposure (Masten & Osofsky, 2010).

It is also possible that child proximity offers only a simplistic measure of exposure, and what matters more at the psychological level is the perception of the disaster impact (e.g., Pfefferbaum et al., 2000). Consistently, there is considerable evidence that subjective exposure to the disaster and related elements (e.g., perceived life threat) systematically impact on health-related outcomes (La Greca et al., 2010) and can be more relevant in determining children's post-disaster response (Silverman & La Greca, 2002).

Another individual-level variable, relevant to understand how people respond to the disaster, is *coping style* (8%). The effects of coping with the consequences of disasters differ

depending on the type of coping children were able to adopt, with negative coping (venting negative feelings, ruminating, and avoiding stressors) generally showing negative, and active coping (cognitive restructuring, emotional regulation, social support) showing positive effects on health-related, but also on cognitive (e.g., cognitive performance) variables (Cadamuro, Versari, Vezzali, Giovannini, & Trifiletti, 2015; Terranova, Boxer, & Morris, 2009).

Individual differences in Theory of Mind (ToM), mental health and cognitive skills also play a relevant role. ToM, that is the ability to understand others' mental states and to understand and share emotions with others, appears to buffer the negative outcomes of disasters. For example, ToM mediated the effect of coping style and was associated with better cognitive performance (Cadamuro et al., 2015).

Sprung (2008) reported that 5- to 8-year-old children who had more developed ToM skills displayed stronger intrusive thoughts after Hurricane Katrina, but were also more receptive to learning strategies to cope with them. Greater competency beliefs promoted more post-traumatic growth in children aged 6 to 15 who were exposed to Hurricane Floyd (Cryder, Kilmer, Tedeschi, & Calhoun, 2006).

The level of anxiety or the tendency to experience negative emotions are risk factors that have been linked to the development of PTSD. *Pre-existing child anxiety and depression* have been shown to significantly predict post-disaster PTSD (Weems et al., 2007). Furthermore, cognitive (e.g., general intelligence, cognitive flexibility) and self-regulation skills are protective factors for children in disasters (Masten & Obradovic 2008). For example, Terranova et al. (2009) reported that effortful control abilities (shifting, planning, and inhibiting unwanted behaviors) buffered children's PTSD symptoms after Hurricane Katrina.

Importantly, the above individual factors may interact with other factors to ultimately determine the impact of disasters. For instance, children from minority groups (e.g., with disabilities) or living in poverty may be more exposed to negative consequences at physical, psychological, and educational level that may aggravate the impact of disasters (Peek & Stough, 2010; Takada, 2013). Therefore, it is important to also consider factors relating to the social context in which children live. Children live within a family system (interpersonal level) that is integrated into a community (group level) within a cultural and ethnic context (intergroup level).

Interpersonal Level

Several factors regarding relations with relevant other individuals contribute to determining children's responses to disasters, such as parents (parents' reactions, parental coping, relations between parents), social (school) environment, and social support (Table 7 in OSM).

The first important determinants of child's adjustment in disaster settings are the *parents*, in particular the quality of interactions within a family and the family's reactions (Hausman, et al., 2020; Hlodversdottir, et al., 2018; Kessel et al., 2019). Osofsky and colleagues (2009) reported higher levels of post-traumatic stress symptoms among young children who had been separated from caregivers during the hurricane. Children and their parents respond to each other's stress, and parents serve as role models for coping, therefore different studies (15%) have examined adaptation to disasters on a family level. Parents' reactions to the disaster and their ability to make the child feel secure are critical factors impacting upon the child (Mikyung, Se-hwa, & Lee-jin, 2020) Especially, children's emotional and behavioral problems and their distress are associated with irritable, depressed, distressed, dysfunctional, and overprotective families (Cadamuro, Versari, Vezzali, & Trifiletti, 2016). Parents and caregivers with such

characteristics may therefore be unable to provide adequate support as they face their own challenges in dealing with the effects of potentially traumatic events (Felix, Kaniasty, You, & Canino, 2015). Finally, parental conflict has deleterious effects on children's responses. Wasserstein and La Greca (1998) found that higher parental conflict after Hurricane Andrew was associated with more stress symptoms among children, possibly because it lowered reciprocal help among family members.

Health and psychological effects on children can manifest even years later, starting from prenatal exposure to disaster. Research has demonstrated associations between various types of prenatal maternal objective exposure (e.g., financial loss) or psychological distress (anxiety, depression, psychological distress, stress), and children's anxiety symptomatology (internalizing behaviors, anxiety symptoms) and cognitive development (intellectual, language and functional play) (Buthmann et al., 2019; Li et al., 2019; Nomura et al., 2019; Simcock et al., 2019; Strahm et al., 2020).

Among the protective factors for children offered by communities in the aftermath of disaster are schools and other *safe environments* for children to play and learn (Le Brocque, et al., 2017). Schools can provide a stable, supportive environment for children and a sense of safety and security (Mooney, Tarrant, Paton, Johnston, & Johal, 2020). These institutions serve to re-establish routines in a child's life, and may provide respite for parents, opportunities for peer interaction, constructive activities, and connections to relevant adults (e.g., teachers) or peers. Interventions realized in the schools have helped children to articulate their feelings, process grief, regulate emotions (Powell & Holleran-Steiker, 2017), improve coping skills and peer relationships (Amin, Nadeem, Iqbal, Asadullah, & Hussain, 2020; Hansel, Osofsky, Osofsky, & Speier, 2019).

Disasters tend to damage children's social networks (La Greca et al., 2010). It is not surprising then that *social support*¹ has been the main protective factor identified by research (12%), being associated with positive outcomes for health and well-being (Kroska, Miller, Roche, Kroska, & O'Hara, 2018; Usami et al., 2019)) (cf. Table 8 in OSM). Further indirect evidence for the role of social support on health and well-being comes from studies examining the effects of social exclusion. Being excluded or rejected by other people (especially in threatening situations like after a disaster) can lead to lower self-esteem, loss of control, anxiety, depression, and neurological responses associated with physical pain (Shelton, Richeson, & Vorauer, 2006). Social support and self-esteem are closely linked and can be intended as coping mechanisms in stressful situations (Taylor & Stanton, 2007).

Group and Intergroup Level

Only recently has psychological research on disasters started taking into account the processes involved when focusing on the individual as a member of social groups, shifting the focus from one-to-one interactions (interpersonal level) to group processes and intergroup relations. Social support can be provided not only in interpersonal interactions (e.g., by an individual teacher), but also in groups (e.g., peer groups), as well as by communities composed of different social groups. Specifically, we consider social support given to individuals *as members of an ingroup category, to be different from that given to outgroup members*, which in turn is different from social support provided to people as unique individuals (i.e., when a social category is not salient). For instance, a child distressed because of the disaster can be helped cope with it individually by a psychologist. In contrast, in order to foster peer support as a means to cope with collective distress after a disaster, the school could organize interventions at the level of the class, explaining the importance of staying together and helping each other to face

the disaster consequences. When however ingroup-outgroup distinctions are salient, especially when conflictual intergroup relations are considered, helping directed at the outgroup (even if the ingroup received the same help) may be perceived as a threat (since one may fear that the ingroup receives less help than it deserves), unless groups are included in a superordinate identity (Gaertner & Dovidio, 2000). However, this research is almost non-existent when children are considered. We argue that processes at group and *intergroup* levels can strongly impact upon children, and need to be included in disaster research.

Note that although group and intergroup level can be distinguished, they are conceptually related (and this is why we considered both of them in the same section). The boundary between group and intergroup level may however be subtle. As we argued, for instance, the disaster can lead to a superordinate social identity as a community (group level), that in some cases re-shape relations between former relevant group identities (e.g., multicultural context – intergroup level) by making salient that they belong to a single group (if such a category already exists) or by creating a new emergent group.

In most studies taking into account the role of ‘race’, researchers investigated the differential impact of the event depending on one’s ethnic group, with mixed findings. March, Amaya-Jackson, Terry, and Constanzo (1997) showed that race represents a risk factor for distress: African (both male and female) and Caucasian (female) Americans were more likely to exhibit post-traumatic stress and comorbid symptoms than Caucasians (males). Similarly, following Hurricane Hugo (Shannon, Lonigan, Finch, & Taylor, 1994) and Hurricane Floyd (Pullins, McCammon, Lamson, Wuensch, & Mega, 2005), African American youths reported greater PTSD symptoms than Caucasian children. These findings suggest that children from

ethnic minority groups may have greater difficulty in responding to and recovering from the impact of the disaster.

By contrast, Jones, Frary, Cunningham, Weddle, and Kaiser (2001) assessed the impact of Hurricane Andrew on 212 African American, Caucasian, and Hispanic elementary and middle school children 6 months after the disaster, reporting no race differences. Similarly, Russoniello et al. (2002) found that ethnicity was not significantly associated with PTSD in a sample of 218 children aged 9-12 years after Hurricane Floyd.

Brown, Mistry, and Bigler (2007) showed that group-level factors may also impact on attributions. They found that Hurricane Katrina raised several issues related to race and class: older African American children were less likely than younger African American children to attribute the delayed relief to individual culpability, and slightly more likely to attribute it to racial discrimination. All youth believed in the role of the government, but younger children were more likely to rate it as effective.

The studies reported above considered group-level factors such as race mainly as a demographic variable, testing differences in distress between groups. Other studies instead focused on the different *psychological processes* that members of different groups can activate in response to disasters. When considered in these terms, group and intergroup processes can both be risk and protective factors for children in the context of disasters. On the one hand, disasters can exacerbate the detrimental consequences of intergroup processes. According to social identity theory (Tajfel & Turner, 1979), we seek positive distinctiveness for our social identities, and one of the ways that we might positively differentiate our ingroup from an outgroup under certain conditions is by discrimination against that outgroup. For instance, the risk of discriminating against or excluding the minority group may be particularly relevant when

resources are (perceived as) limited and need to be shared within other groups (Andrighetto, Vezzali, Bergamini, Nadi, & Giovannini, 2016). When intergroup conflict is salient, the perception of limited resources may result in increased competition between groups and lower intentions to help the outgroup; or outgroup behavior can be interpreted negatively, and this negative contact may dampen the desire to support outgroup survivors of one's community (Vezzali et al., 2017).

Furthermore, in the long run categorization may cause segregation and conflict, weakening the community collective response (Andrighetto et al., 2016). In a study with elementary school children in affected areas six months after the 2012 Italian earthquake, categorizing as two groups was associated with Italian children's more negative outgroup attitudes toward immigrants (see Vezzali, Cadamuro, Versari, Giovannini, & Trifiletti, 2015). In addition, different groups have different group norms, which may include hostility and negative stereotypes towards outgroups. When group identities and their negative norms are salient, this would lead to worse intergroup relations and to fewer resilient responses across the community as a whole.

On the other hand, social identities can act as buffers, or even as motivating factors leading to greater resilient responses, such as support and cooperation (Vezzali et al., 2017). Identifying as a member of a group enhances social cohesion and fosters helping among ingroup members (Turner et al., 1987). In a community characterized by several groups (e.g., multiethnic community), individuals can react to disaster threat by categorizing in terms of a specific subgroup (e.g., ethnic group) (Andrighetto et al., 2016). This categorization, that uses group identification as a buffer from threats from other groups, may be beneficial in terms of health outcomes (Shelton et al., 2006). This conclusion is consistent with the social cure approach,

stating that social identities have a positive impact on post-disaster well-being (Jetten, Haslam, & Haslam, 2015). Individuals are better able to cope with stressors if they embrace their group identity and if valued social identities can be maintained or new social identities can be developed (Jetten, Haslam, Haslam, & Branscombe, 2009). The development of new positive and meaningful social identities can be a source of resilience in the face of trauma, and the reaction to trauma is worse if the trauma undermines relevant social identities (Muldoon et al., 2019). However, an important feature of disasters is that they can transform relations between people, including group boundaries. For instance, according to the concept of ‘altruism born of suffering’, the shared traumatic experience can forge new or reinforce existing relations between individuals (Staub, 2003). In social identity terms, new inclusive shared social identities can develop in disasters as a function of common fate (Drury, 2018). In line with altruism born of suffering (Staub, 2003), self-categorization can be at the superordinate level, including all members of the community irrespective of subgroups. Such identification enables benefits (in particular social support) previously reserved for the ingroup to be extended to outgroup members. In addition to fostering adaptive responses and shielding from negative outcomes typically associated with conflictual intergroup relations, superordinate identification can allow the creation of new or reinforcement of existing ties between individuals and a stronger community response, facilitating collective recovery. Consistent with this argument, among Italian children, higher perceived disaster threat was associated with more positive attitudes toward immigrants, and greater desire to have contact with and help them, via perceptions of belonging to the common group of Italian and immigrant child survivors (see Vezzali et al., 2017).

Interestingly, even when not explicitly framed in terms of intergroup relations, referring to a shared identity can help strengthening community ties. Vezzali et al. (2015, 2016, 2017) found that PTSD symptoms, used as independent variables as a form of subjective disaster exposure, were associated with greater identity fusion with other children exposed to the disaster, and in turn with greater perceptions that children survivors were members of a common group. These common group perceptions were associated with greater prosocial intentions toward other disaster survivors.

Depending on the salience of contextual social identities, responses to the disaster may differ. In some cases (intergroup level), formation of new identities may depend at least in part by recategorization of former groups; in other cases (group level), where other group identities are not salient and/or irrelevant, the only meaningful identity can be that of the community that has been struck by the disaster. In both cases, we argue that what is relevant is taking into account the new group identities stemming from the disaster that can be a strong determinant of attitudes and behaviors within, but also outside the community.

Interplay between individual, interpersonal, group, and intergroup levels

We have reviewed evidence that individual, interpersonal, group and intergroup variables can act as risk and protective factors in children in disasters. We propose that the impact of disasters on children is the result of a complex interplay between these levels (Figure 1). Each of them can buffer or enhance the direct (e.g., PTSD) and indirect (e.g., secondary stressors such as discrimination stemming from increased threat perceptions) consequences of the disaster and enhance (or undermine) resilience.

A likely possibility is that the four levels have additive effects, as also shown by studies testing these factors as independent variables within the same study (Felix, You, & Canino,

2013; La Greca et al., 2010) (cf. Table 7 in OSM). However, we argue that a full understanding of the impact of disasters can be understood when taking into account their reciprocal interactions. The aim of this section is to show evidence that factors pertaining to the four dimensions can interact in predicting outcome related to disasters.

With respect to interactions between individual and interpersonal dimensions, for instance, Cadamuro et al. (2015) found that whereas active coping (individual level) was positively associated with ToM abilities (which in turn were associated with better cognitive performance), the association between avoidant coping and ToM depended on perceived social support (interpersonal level), such that avoidant coping was positively associated with ToM only when perceived social support was high.

Furthermore, in a sample of elementary school children and their parents in the aftermath of an earthquake, Cadamuro et al. (2016) found that the indirect association of mothers' PTSD symptoms (interpersonal level) with increased reliance on negative coping (via children's PTSD symptoms), was buffered by ToM (individual level), i.e. this association was significant only when ToM was low. Felix et al. (2015) have shown that parent-child relationship quality (interpersonal level) acted as moderator of the influence of hurricane exposure (individual level) on physical health among children: hurricane exposure had weaker negative consequences when parent-child relationship quality was high.

Looking at characteristics of the school and community microsystem that may affect outcomes in children, Felix, You, and Canino (2013) found that gender (female) and living in poverty, as well as disaster exposure (all individual-level factors) were associated with an increased risk of internalizing psychopathology in children, but these effects were reduced when neighborhood climate was positive and school violence was low (interpersonal level).

In relation to the interaction between individual and group levels, there is no systematic evidence, but we can suggest the process based on the broader literature on disasters. Thus those individuals who identify most strongly with other survivors of an earthquake have been found to be those most likely to be influenced by the sight of supportive behavior to be supportive themselves (see Drury, 2018; Drury et al., 2019).

Regarding the relation between interpersonal and intergroup level, it was found for instance that ethnic group membership (intergroup level) moderated the relation between parental conflict (interpersonal level) and PTSD following a hurricane, with detrimental effects of parental conflict significant for Hispanics, but not for Whites (Wasserstein & La Greca, 1998).

With respect to individual-intergroup interplay, Vezzali et al.'s (2017) results showed that perceived disaster threat (individual level) was indirectly associated with greater contact and helping behavioral intentions toward the outgroup via greater perceptions of belonging to a common group among majority (Italian) but not minority (immigrant) children (moderation by ethnicity: intergroup level).

The scarcity (3%) of studies testing interaction effects between factors related to the different levels in reviewed literature limit our possibility to make predictions about the direction of these interactions, also considering the rather large number of potential factors pertaining to each of these levels. However, from this analysis, it is clear that the different dimensions (individual, interpersonal, group, intergroup) can and do interact; therefore, considering them in isolation, only focusing on their additive effects, may be misleading and limit our capacity to fully understand the impact of disasters in children and how to react to it. In contrast, considering their interplay can also help reconciling mixed findings in literature.

Building Resilience

From the analysis of the literature, it is now well established that exposure to a disaster increases the risk of developing psychological disorders; however, research on traumatized children has revealed wide variations in outcomes. Despite the numerous consequences, children frequently demonstrate their ability to recover from extreme adversity (Jones, 2008). It is therefore crucial to highlight the factors that can protect children, reduce the impact of stressors, promote capacity for mastery, and help to resume normal functioning (Lazarus & Folkman, 1984). In this review we have highlighted the need to include the group and intergroup levels of analysis as well as the interaction between all four levels in future research. We argue that this approach allows to capture the multidimensionality and complexity of this context to fully understand how to promote resilience in children and the communities they live in. This is because adaptation to traumatic experiences is a dynamic process involving multiple interacting systems within the individual organism and many interactions, including relationships with other people and the environment (Masten & Narayan, 2012).

Resilience is defined by the American Psychological Association (2014) as “the process of adapting well in the face of adversity, trauma, tragedy, threats or even significant sources of stress (para. 4).” It refers to the process of adapting well to adversity in life, such as stressful personal life events or disasters, and it can be collective as well as personal (Williams & Drury, 2010). Resilience factors include a host of biological, psychological, social and cultural factors that interact to determine how a dynamic system responds to stressful experiences adapting successfully to disturbances that threaten the viability, the function, or the development of that system (Masten, 2014).

However, from our analysis, it is clear that the interest of researchers has been on a rather narrow definition of resilience, echoing the literature on trauma more generally. This is because

outcome variables mostly relate to individual trauma (e.g., depression, PTSD), and predictors or interventions are largely based on individual factors (Tables 1, 6, 7 in OSM). Similarly, interventions to alleviate stress after disaster exposure are targeted at individual level, e.g., Eye Movement Desensitization and Reprocessing (EMDR) or Group Cognitive-Behavioral Interventions (GCBI) (Brown et al., 2017) (Table 3 in OSM). Although disasters lead to individual distress and trauma, distress and trauma are collective and shared by communities as a whole, and we argue for the need to employ actions that can benefit a large number of people. Such actions should not only be “curative” in the sense of targeting individual distress and disorder but, building on a broader understanding of resilience, should support recovery in the community as a whole, for instance promoting reciprocal help, coping, and collective action aimed at obtaining support from relevant institutions and uninvolved bystanders. We therefore argue for the need to rely on the concept proposed by Drury et al. (2019) of collective psychosocial resilience, referring to survivors that face the disaster *as a group*.

In line with the argument above, the psychological literature on community resilience refers to a network of adaptive capacities, namely community competence, social capital, economic development and communication, that allow the community in which the child lives in to fully recover (Norris et al., 2008). Perceived and actual social support, a sense of a community, collective empowerment and action play important roles in interaction with economic resources or media information. In particular, social capital has been shown to be an efficient source of instrumental and emotional support to establish cohesion. Social capital acts as a bonding source to strengthen existing ties in the family community (Norris et al., 2002; Norris et al., 2008), but also bridges ties to organizations for indirect help, e.g., through church (Hawkins & Maurer, 2009), and links the community with policy makers (Szreter & Woolcock,

2004). Social capital is typically a function of psychological group memberships (Helliwell & Barrington-Leigh, 2012). Note however that literature on community resilience has been generally detached from the disaster literature, and operationalizations of resilience in terms of community were largely absent from the studies that we reviewed.

Our argument is also in line with research in resilience in development. Factors that enhance child resiliency are effective parenting, positive self-concept, self-regulation, social competence, cognitive flexibility, problem-solving skills, communication skills, empathy, assertiveness, humor, group affiliation, and the ability to elicit caretaking behaviors (Masten, 2007). Furthermore, communities are constituted by several groups such as multiethnic communities but also communities with wealth disparities or vulnerable groups, which should be taken into account when designing interventions.

In our article we argue for the importance of combining individual support with the creation and reinforcement of positive relations between individuals (such as families and peers), within groups, and between groups (such as majority and minority groups). Taking into account all the components that reciprocally interact in a community (and beyond) provides a more powerful way to promote resilience at individual *and* collective levels (therefore also capitalizing on a more general concept of community resilience, or collective psychosocial resilience; Drury et al., 2019). In doing so, since group membership has an important effect on behavior, and especially collective behavior, future research should build on findings relating to people's social identities and collective empowerment (Drury, 2018).

Conclusion

We argue that disasters have consequences which are a complex interplay between individual, interpersonal, group, and intergroup factors. Each of the levels contains risk or

protective factors that can enhance or buffer the direct and indirect consequences of the disaster and lead to resilience. We provided evidence that these levels interact, and that in order to understand children's responses to disasters considering all of them is of vital importance. Our aim is to provide a new perspective that highlights the relevance of *all* four levels, by offering a wider conceptualization of distress and resilience as determined by multiple individual and social factors. This review hopes to stimulate future research that examines the complex nature of disasters and that eventually allows the development of an integrated model considering all levels. Understanding the consequences of disasters for children is crucial for their development and well-being, as well as for the design of effective interventions that strengthen protective factors in children, families, and the society.

Footnote

1. Note that although an individualistic approach considers social support as an interpersonal variable, this may also be a function of group membership (cf. Vezzali et al., 2017).

Funding

The authors have no funding to disclose.

Conflict of interest

The authors declare that they have no conflict of interest.

References

- American Psychological Association. (2014). *The road to resilience*. Washington, DC: American Psychological Association. Retrieved from <http://www.apa.org/helpcenter/road-resilience.aspx>
- Amin, R., Nadeem, E., Iqbal, K., Asadullah, M. A., & Hussain, B. (2020). Support for Students Exposed to Trauma (SSET) Program: An Approach for Building Resilience and Social Support Among Flood-Impacted Children. *School Mental Health, 12*, 493-506.
doi:10.1007/s12310-020-09373-y
- Andrighetto, L., Vezzali, L., Bergamini, G., Nadi, C., & Giovannini, D. (2016). Inside the earthquake: Perceived disaster exposure and helping intentions among Italian and immigrant victims of the 2012 Italian earthquakes. *Group Processes and Intergroup Relations, 19*, 753-768. doi:10.1177/1368430215591040
- Baggerly, J. N., & Exum, H. (2008). Counseling children after natural disasters: Guidance for family therapists. *American Journal of Family Therapy, 36*, 79-93.
- Bokszczanin, A. (2007). PTSD symptoms in children and adolescents 28 months after a flood: Age and gender differences. *Journal of Traumatic Stress, 20*, 347-351.
- years after the Marmara earthquake. *Child and Adolescent Mental Health, 13*, 134-139
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press. ISBN 0-674-22457-4.
- Bronfenbrenner, U. (2005). *Making human beings human: Bioecological perspectives on human development*. Thousand Oaks, CA: Sage Publications.
- Brown, C. S., Mistry, R. S., & Bigler, R. S. (2007). Hurricane Katrina: African American Children's Perceptions of Race, Class, and Government Involvement Amid a National Crisis.

Analyses of Social Issues and Public Policy, 7, 191-208. doi:10.1111/j.1530-2415.2007.00139.x

Brown, R. C., Witt, A., Fegert, J. M., Keller, F., Rassenhofer, M., & Plener, P. L. (2017).

Psychosocial interventions for children and adolescents after man-made and natural disasters: a meta-analysis and systematic review. *Psychological Medicine*, 47, 1893-1905. doi:10.1017/s0033291717000496

Buthmann, J., Finik, J., Ventura, G., Zhang, W., Shereen, A. D., & Nomura, Y. (2019). The

children of Superstorm Sandy: Maternal prenatal depression blunts offspring electrodermal activity. *Biological Psychology*, 146, Article 107716.

<https://doi.org/10.1016/j.biopsycho.2019.107716>

Cadamuro, A., Versari, A., Vezzali, L., & Trifiletti, E. (2016). Preventing the detrimental effect

of posttraumatic stress in young children: The role of theory of mind in the aftermath of a natural disaster. *European Journal of Developmental Psychology*, 13, 52-66.

doi:10.1080/17405629.2015.1055240

Cadamuro, A., Versari, A., Vezzali, L., Giovannini, D., & Trifiletti, E. (2015). Cognitive

performance in the aftermath of a natural disaster: The role of coping strategies, theory of mind and peer social support. *Child and Youth Care Forum*, 44, 93-113. doi:10.1007/s10566-014-9272-z

Catani, C., Gewirtz, A. H., Wieling, E., Schauer, E., Elbert, T. & Neuner, F. (2010). Tsunami,

war, and cumulative risk in the lives of Sri Lankan schoolchildren. *Child Development*, 81, 1176-1191.

- Catani, C., Jacob, N., Schauer, E., Kohila, M., & Neuner, F. (2008). Family violence, war, and natural disasters: A study of the effect of extreme stress on children's mental health in Sri Lanka. *BMC Psychiatry*, *8*, 33. doi:10.1186/1471-244X-8-33
- Cheng, J., Liang, Y.-M., Zhou, Y.-Y., Eli, B., & Liu, Z.-K. (2019). Trajectories of PTSD symptoms among children who survived the Lushan earthquake: a four-year longitudinal study. *Journal of Affective Disorders*, *252*, 421-427. doi:10.1016/j.jad.2019.04.047
- Copeland, W. E., Keeler, G., Angold, A., & Costello, E. J. (2007). Traumatic Events and Posttraumatic Stress in Childhood. *Archives of General Psychiatry*, *64*, 577-584. doi:10.1001/archpsyc.64.5.577
- Costa, N., Weems, C., & Pina, A. (2009). Hurricane Katrina and youth anxiety: the role of perceived attachment beliefs and parenting behaviors. *Journal of Anxiety Disorders*, *23*, 935-941.
- Cryder, C. H., Kilmer, R. P., Tedeschi, R. G., & Calhoun, L. G. (2006). An exploratory study of posttraumatic growth in children following a natural disaster. *American Journal of Orthopsychiatry*, *76*, 65- 69.
- Danielson, C. K., Cohen, J. R., Adams, Z. W., Youngstrom, E. A., Soltis, K., Amstadter, A. B., & Ruggiero, K. J. (2016). Clinical Decision-Making Following Disasters: Efficient Identification of PTSD Risk in Adolescents. *Journal of Abnormal Child Psychology*, *45*, 117-129.
- De Young, A. C., Kenardy, J. A., & Cobham, V. E. (2011). Trauma in Early Childhood: A Neglected Population. *Clinical Child and Family Psychology Review*, *14*, 231-250. doi:10.1007/s10567-011-0094-3

- Drury, J. (2018). The role of social identity processes in mass emergency behaviour: An integrative review. *European Review of Social Psychology, 29*, 38-81.
doi:10.1080/10463283.2018.1471948
- Drury, J., Carter, H., Cocking, C., Ntontis, E., Guven, S. T., & Amlot, R. (2019). Facilitating collective psychosocial resilience in the public in emergencies: Twelve recommendations based on the social identity approach. *Frontiers in Public Health, 7*, 1-21.
doi:10.3389/fpubh.2019.00141
- Drury, S.S., Scheeringa M.S., & Zeanah C.H. (2008). The traumatic impact of Hurricane Katrina on children in New Orleans. *Child and Adolescent Psychiatric Clinics of North America, 17*, 685-702.
- Eksi, A., Braun, K. L., Ertem-Vehid, H., Peyerli, G., Saydam, R., Toparlak, D., & Alyanak, B. (2007). Risk factors for the development of PTSD and depression among child and adolescent victims following a 7.4 magnitude earthquake. *International Journal of Psychiatry in Clinical Practice, 11*, 190-199.
- Evans, L., & Oehler-Stinnett, J. (2006). Children and Natural Disasters. *School Psychology International, 27*, 33-55. doi:10.1177/0143034306062814
- Farooqui M., Quadri S.A., Suriya S.S. et al. (2017). Posttraumatic stress disorder: a serious post-earthquake complication. *Trends in Psychiatry and Psychotherapy, 39*, 135-43.
- Felix E., Hernández L. A., Bravo M., Ramirez R., Cabiya J., & Canino G. (2011). Natural disaster and risk of psychiatric disorders in Puerto Rican children. *Journal of Abnormal Child Psychology, 39*, 589-600. 10.1007/s10802-010-9483-1

- Felix, E., Kaniasty, K., You, S., & Canino, G. (2015). Parent-child relationship quality and gender as moderators of the influence of hurricane exposure on physical health among children and youth. *Journal of Pediatric Psychology, 41*, 73-85. doi:10.1093/jpepsy/jsv038
- Felix, E., You, S., & Canino, G. (2013). School and community influences on the long term postdisaster recovery of children and youth following hurricane Georges. *Journal of Community Psychology, 41*, 1021-1038. doi:10.1002/jcop.21590
- Feo, P., Di Gioia, S., Carloni, E., Vitiello, B., Tozzi, A. E., & Vicari, S. (2014). Prevalence of psychiatric symptoms in children and adolescents one year after the 2009 L'Aquila earthquake. *BMC Psychiatry, 14*. doi:10.1186/s12888-014-0270-3
- Furr, J. M., Comer, J. S., Edmunds, J. M., & Kendall, P. C. (2010). Disasters and youth: A meta-analytic examination of posttraumatic stress. *Journal of Consulting and Clinical Psychology, 78*, 765-780. doi:10.1037/a0021482
- Gordon-Hollingsworth, A. T., Yao, N., Chen, H., Qian, M., & Chen, S. (2015). Understanding the Impact of Natural Disasters on Psychological Outcomes in Youth from Mainland China: a Meta-Analysis of Risk and Protective Factors for Post-Traumatic Stress Disorder Symptoms. *Journal of Child & Adolescent Trauma, 11*, 205-226.
- Han, L., Zhang, Y., & Zheng, Y. (2012). Responses over time of child and adolescent survivors to the 2008 Wenchuan, China Earthquake. *Social Behavior and Personality: An International Journal, 40*, 1147-1152. doi:10.2224/sbp.2012.40.7.1147
- Hansel, T. C., Osofsky, H. J., Osofsky, J. D., & Speier, A. H. (2019). Katrina inspired disaster screenings and services: School-based trauma interventions. *Traumatology, 25*, 133-141. <https://doi.org/10.1037/trm0000178>

Hausman, E. M., Black, S. R., Bromet, E., Carlson, G., Danzig, A., Kotov, R., & Klein, D. N.

(2020). Reciprocal effects of maternal and child internalizing symptoms before and after a natural disaster. *Journal of family psychology*. Advance online publication.

<https://doi.org/10.1037/fam0000653>

Hawkins, R. L., & Maurer, K. (2009). Bonding, bridging and linking: How social capital

operated in New Orleans following Hurricane Katrina. *British Journal of Social Work, 40*, 1777-1793. doi:10.1093/bjsw/bcp087

Helliwell J. F., & Barrington-Leigh, C. P. (2012). How much is social capital worth? In J. Jetten,

C. Haslam, & S. A. Haslam (Eds.), *The social cure: Identity, health, and well-being* (pp. 55-71). Hove, UK: Psychology Press.

Hensley-Maloney, L. & Varela, R.E. (2009). *Child Youth Care Forum, 38*, 135-149.

<https://doi.org/10.1007/s10566-009-9072-z>

Hlodversdottir, H., Thorsteinsdottir, H., Thordardottir, E. B., Njardvik, U., Petursdottir, G., &

Hauksdottir, A. (2018). Long-term health of children following the Eyjafjallajökull volcanic eruption: a prospective cohort study. *European Journal of Psychotraumatology, 9* (sup2), 1442601.

Jetten, J., Haslam, C, & Haslam, S. A. (Eds.). (2015). *The social cure: Identity, health and well-*

being. Hove, England: Psychology Press.

Jetten, J., Haslam, C., Haslam, S. A., & Branscombe, N. R. (2009). *The social cure.*

Scientific American Mind, 20, 26-33. doi:10.1038/scientificamericanmind0909-26

Jetten, J., & Spears, R. (2003). The divisive potential of differences and similarities: The role of

intergroup distinctiveness in intergroup differentiation. *European Review of Social*

Psychology, 14, 203-241. doi:[10.1080/10463280340000063](https://doi.org/10.1080/10463280340000063)

- Jones, L. (2008). Responding to the needs of children in crisis. *International Review of Psychiatry, 20*, 291-303. doi:10.1080/09540260801996081
- Jones, R. T., Frary, R., Cunningham, P., Weddle, J. D., & Kaiser, L. (2001). The psychological effects of Hurricane Andrew on ethnic minority and Caucasian children and adolescents: A case study. *Cultural Diversity and Ethnic Minority Psychology, 7*, 103-108. doi:10.1037/1099-9809.7.1.103
- Kaniasty, K., & Norris, F. (1999). The experience of disaster: Individuals and communities sharing trauma. In R. Gist & B. Lubin (Eds.), *Response to disaster: Psychosocial, community and ecological approaches* (pp. 25-61). Philadelphia, PA: Brunner/Mazel.
- Kar, N., Mohapatra, P. K., Nayak, K. C., Pattanaik, P., Swain, S. P., & Kar, H. C. (2007). Post-traumatic stress disorder in children and adolescents one year after a super-cyclone in Orissa, India: exploring cross-cultural validity and vulnerability factors. *BMC Psychiatry, 7*. doi:10.1186/1471-244x-7-8
- Kessel, E. M., Nelson, B. D., Finsaas, M., Kujawa, A., Meyer, A., Bromet, E., ... Klein, D. N. (2019). Parenting style moderates the effects of exposure to natural disaster-related stress on the neural development of reactivity to threat and reward in children. *Development and Psychopathology*, 1-10. doi:10.1017/s0954579418001347
- Kronenberg, M. E., Hansel, T. C., Brennan, A. M., Osofsky, H. J., Osofsky, J. D., & Lawrason, B. (2010). Children of Katrina: Lessons learned about postdisaster symptoms and recovery patterns. *Child Development, 81*, 1241-1259. doi:10.1111/j.1467-8624.2010.01465.x
- Kroska, E. B., Miller, M. L., Roche, A. I., Kroska, S. K., & O'Hara, M. W. (2018). Effects of traumatic experiences on obsessive-compulsive and internalizing symptoms: The role of avoidance and mindfulness. *Journal of Affective Disorders, 225*, 326-336.

- La Greca, A. M., Silverman, W. K., Lai, B., & Jaccard, J. (2010). Hurricane-related exposure experiences and stressors, other life events, and social support: Concurrent and prospective impact on children's persistent posttraumatic stress symptoms. *Journal of Consulting and Clinical Psychology, 78*, 794-805. doi:10.1037/a0020775
- La Greca, A.M., Silverman, W.K., & Wasserstein, S.B. (1998). Children's predisaster functioning hurricane Andrew. *Journal of Consulting and Clinical Psychology, 66*, 883- 892.
- Lai B.S., La Greca A.M., Auslander B.A., & Short M.B. (2013). Children's symptoms of posttraumatic stress and depression after a natural disaster: Comorbidity and risk factors. *Journal of Affective Disorders, 146*, 71-78. doi:pii: S0165-0327(12)00612-X
- Lazarus. R.S., & Folkman, S. (1984). *Stress, Appraisal and Coping*. Springer Publishing.
- Le Brocque, R., De Young, A., Montague, G., Pocock, S., March, S., Triggell, N., . . . Kenardy, J. (2017). Schools and natural disaster recovery: The unique and vital role that teachers and education professionals play in ensuring the mental health of students following natural disasters. *Journal of Psychologists and Counsellors in Schools, 27*, 1-23. 10.1017/jgc.2016.17
- Li, G., Wang, L., Cao, C., Fang, R., Cao, X., Chen, C., Elhai, J. D., & Hall, B. J. (2019). Posttraumatic stress disorder and executive dysfunction among children and adolescents: A Latent Profile Analysis. *International Journal of Clinical and Health Psychology, 19*, 228-236. <https://doi.org/10.1016/j.ijchp.2019.07.001>
- March, J. S., Amaya-Jackson, L., Terry, R., & Costanzo, P. (1997). Posttraumatic Symptomatology in Children and Adolescents After an Industrial Fire. *Journal of the American Academy of Child & Adolescent Psychiatry, 36*, 1080-1088. doi:10.1097/00004583-199708000-00015
- Marsee, M. A. (2008). Reactive aggression and posttraumatic stress in adolescents affected by

- Hurricane Katrina. *Journal of Clinical Child & Adolescent Psychology*, 37, 519-529.
- Masten A. S. (2014). Global perspectives on resilience in children and youth. *Child Development*, 85, 6-20. doi:10.1111/cdev.12205
- Masten, A. S. (2007). Resilience in developing systems: Progress and promise as the fourth wave rises. *Development and Psychopathology*, 19, 921-930. doi:10.1017/s0954579407000442
- Masten, A. S., & Narayan, A. J. (2012). Child development in the context of disaster, war, and terrorism: Pathways of risk and resilience. *Annual Review of Psychology*, 63, 227-257. doi:10.1146/annurev-psych-120710-100356
- Masten, A. S., & Obradovic, J. (2008). Disaster preparation and recovery: Lessons from research on resilience in human development. *Ecology and Society*, 13, 9. doi:10.5751/ES-02282-130109
- Masten, A. S., & Osofsky, J. D. (2010). Disasters and their impact on child development: Introduction to the special section. *Child Development*, 81, 1029-1039. doi:10.1111/j.1467-8624.2010.01452.x
- Mikyung Jang, Se-hwa Lee & Lee-jin Kim (2020) Post-traumatic stress disorder and behavioral problems of parents and children after the 2015 Nepal earthquakes. *International Journal of Mental Health*, 49, 3-16, DOI: 10.1080/00207411.2020.1725719
- Moher, D., Liberati, A., Tetzlaff, J., Altman D.G, & The PRISMA Group (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *PLoS Med*, 6 (7): e1000097. doi:10.1371/journal.pmed1000097
- Mooney, M., Tarrant, R., Paton, D., Johnston, D., & Johal, S. (2020). The school community contributes to how children cope effectively with a disaster. *Pastoral Care in Education*, 1-24. doi:10.1080/02643944.2020.1774632

Muldoon O. T., Haslam S. A., Haslam C., Cruwys T., Kearns M., & Jetten J. (2019). The social psychology of responses to trauma: Social identity pathways associated with divergent traumatic responses. *European Review of Social Psychology, 30*, 311-348.

doi:10.1080/10463283.2020.1711628

Nomura, Y., Davey, K., Pehme, P. M., Finik, J., Glover, V., Zhang, W., ... Ham, J. (2019). Influence of in utero exposure to maternal depression and natural disaster-related stress on infant temperament at 6 months: The children of Superstorm Sandy. *Infant Mental Health Journal, 40*, 204-216. doi:10.1002/imhj.21766

Norris, F. H., Friedman, M. J., Watson, P. J., Byrne, C. M., Diaz, E., & Kaniasty, K. (2002). 60,000 disaster victims speak: Part I. An empirical review of the empirical literature, 1981-2001. *Psychiatry: Interpersonal and Biological Processes, 65*, 207-239.

doi:10.1521/psyc.65.3.207.20173

Osofsky, H. J., Osofsky, J. D., Kronenberg, M., Brennan, A., & Hansel, T. C. (2009).

Posttraumatic stress symptoms in Children after Hurricane Katrina: Predicting the need for mental health services. *American Journal of Orthopsychiatry, 79*, 212-220.

Peek, L. (2008). Children and disasters: Understanding vulnerability, developing capacities, and promoting resilience - an introduction. *Children, Youth and Environments, 18*, 1-29.

doi:10.7721/chilyoutenvi.18.1.0001

Peek, L., Abramson, D. M., Cox, R. S., Fothergill, A., & Tobin, J. (2018). *Children and disasters. In Handbook of disaster research* (pp. 243-262). Springer, Cham.

Peek, L., & Stough, L. M. (2010). Children With Disabilities in the Context of Disaster: A Social Vulnerability Perspective. *Child Development, 81*, 1260-270. doi:10.1111/j.1467-

8624.2010.01466.x

- Pfefferbaum, B., Seale, T. W., McDonald, N. B., Brandt, E. N., Jr., Rainwater, S. M., Maynard, B. T., . . . Miller, P. D. (2000). Posttraumatic stress two years after the Oklahoma City bombing in youths geographically distant from the explosion. *Psychiatry. Interpersonal and Biological Processes*, *63*, 358-370.
- Powell, T., & Holleran-Steiker, L. K. (2017). Supporting Children After a Disaster: A Case Study of a Psychosocial School-Based Intervention. *Clinical Social Work Journal*, *45*, 176-188. doi:10.1007/s10615-015-0557-y
- Pullins, L. G., McCammon, S. L., Lamson, A. S., Wuensch, K. L., & Mega, L. (2005). School-Based Post-Flood Screening and Evaluation: Findings and Challenges in One Community. *Stress, Trauma, and Crisis*, *8*, 229-249. doi:10.1080/15434610500406343
- Russoniello, C. V., Skalko, T. K., O'Brien, K., McGhee, S. A., Bingham-Alexander, D., & Beatley, J. (2002). Childhood Posttraumatic Stress Disorder and Efforts to Cope After Hurricane Floyd. *Behavioral Medicine*, *28*, 61-71. doi:10.1080/08964280209596399
- Samuelson K.W., Krueger C.E., Burnett C., & Wilson C.K. (2009). Neuropsychological functioning in children with posttraumatic stress disorder. *Child Neuropsychology*, *16*, 119-133. doi: 10.1080/09297040903190782
- Saylor, C. F., Cowart, B. L., Lipovsky, J. A., Jackson, C., & Finch, A. J. (2003). Media exposure to September 11: Elementary school students' experiences and posttraumatic symptoms. *American Behavioral Scientist*, *46*, 1622-1642. <https://doi.org/10.1177/0002764203254619>
- Schoeman R, Carey P, Seedat S. (2009). Trauma and posttraumatic stress disorder in South African adolescents: A case-control study of cognitive deficits. *Journal of Nervous and Mental Disease*, *197*, 244-250. doi: 10.1097/NMD.0b013e31819d9533

- Shaffer, D.R., & Kipp, K. (2009). *Developmental psychology: Childhood and adolescence* (8th ed.). Belmont, CA: Wadsworth.
- Shannon, M. P., Lonigan, C. J., Finch, A. J., & Taylor, C. M. (1994). Children Exposed to Disaster: I. Epidemiology of Post-Traumatic Symptoms and Symptom Profiles. *Journal of the American Academy of Child & Adolescent Psychiatry*, 33, 80-93. doi:10.1097/00004583-199401000-00012
- Shelton, J. N., Richeson, J. A., & Vorauer, J. D. (2006). Threatened identities and interethnic interactions. *European Review of Social Psychology*, 17, 321-358. doi:10.1080/10463280601095240
- Silverman, W. K., La Greca, A. M. (2002). Children experiencing disasters: Definitions, reactions, and predictors of outcomes. In La Greca, Annette M. (Ed); Silverman, Wendy K. (Ed); Vernberg, Eric M. (Ed) & Roberts, Michael C. (Ed). (2002). *Helping children cope with disasters and terrorism*, (pp. 11-33). Washington, DC, US: American Psychological Association, xvii, 446 pp.
- Silwal S, Dybdahl R, Chudal R, Sourander A, Lien L. (2018). Psychiatric symptoms experienced by adolescents in Nepal following the 2015 earthquakes. *Journal of Affective Disorders*, 234,239-246. <https://doi.org/10.1016/j.jad.2018.03.002>
- Simcock, G., Cobham, V. E., Laplante, D. P., Elgbeili, G., Gruber, R., Kildea, S., & King, S. (2019). A cross-lagged panel analysis of children's sleep, attention, and mood in a prenatally stressed cohort: The QF2011 Queensland flood study. *Journal of Affective Disorders*, 255, 96-104. doi:10.1016/j.jad.2019.05.041

- Sprung, M. (2008). Unwanted Intrusive Thoughts and Cognitive Functioning in Kindergarten and Young Elementary School-Age Children Following Hurricane Katrina. *Journal of Clinical Child & Adolescent Psychology, 37*, 575-587. doi:10.1080/15374410802148236
- Staub, E. (2003). *The psychology of good and evil: Why children, adults, and groups help and harm others*. Cambridge, UK: Cambridge University Press.
- Strahm, A. M., Bagne, A. G., Rued, H. A., Larson, K. J., Roemmich, J. N., & Hilmert, C. J. (2020). Prenatal traumatic stress and offspring hair cortisol concentration: A nine year follow up to the Red River flood pregnancy study. *Psychoneuroendocrinology, 113*, 104579. doi:10.1016/j.psyneuen.2019.104579
- Szreter, S., & Woolcock, M. (2004). Rejoinder: Crafting rigorous and relevant social theory for public health policy. *International Journal of Epidemiology, 33*, 700-704. doi:10.1093/ije/dyh263
- Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin, & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33-47). Monterey, CA US: Brooks/Cole.
- Takada, S. (2013). Post-Traumatic Stress Disorders and mental health care (lessons learned from the Hanshin-Awaji Earthquake, Kobe, 1995). *Brain and Development, 35*, 214-219. doi:10.1016/j.braindev.2012.09.013
- Tang, B., Liu, X., Liu, Y., Xue, C., Zhang, L. (2014). A meta-analysis of risk factors for depression in adults and children after natural disasters. *BMC Public Health, 14*, 623. doi:10.1186/1471-2458-14-623

- Tang, W., Xu, D., Li, B., Lu, Y., & Xu, J. (2018). The relationship between the frequency of suicidal ideation and sleep disturbance factors among adolescent earthquake victims in China. *General Hospital Psychiatry, 55*, 90-97. doi:10.1016/j.genhosppsy.2018.09.013
- Tanner, T., & Seballos, F. (2012). Action research with children: Lessons from tackling disasters and climate change. *IDS Bulletin, 43*, 59-57.
- Tao, T., X. Duan, and J. Shi (2014) 'Posttraumatic stress symptoms of Chinese rural children and adolescents surviving the 2008 Wenchuan earthquake assessed using CRIES'. *Journal of Loss and Trauma, 19*, 1-11.
- Taylor, S. E., & Stanton, A. L. (2007). Coping Resources, Coping Processes, and Mental Health. *Annual Review of Clinical Psychology, 3*, 377-401.
doi:10.1146/annurev.clinpsy.3.022806.091520
- Terranova, A. M., Boxer, P., & Morris, A. S. (2009). Factors influencing the course of posttraumatic stress following a natural disaster: Children's reactions to Hurricane Katrina. *Journal of Applied Developmental Psychology, 30*, 344-355.
doi:10.1016/j.appdev.2008.12.017
- Terranova, A. S. Morris, S. Myers, M. Kithakya, & Michael Morris. (2015). Preschool Children's Adjustment Following a Hurricane: Risk and Resilience in the Face of Adversity. *Early Education and Development, 26*, 534-548.
- Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorization theory*. Oxford, UK: Blackwell.
- Usami, M., Iwadare, Y., Ushijima, H., Inazaki, K., Tanaka, T., Kodaira, M., ... Saito, K. (2019). Did kindergarteners who experienced the Great East Japan earthquake as infants develop

- traumatic symptoms? Series of questionnaire-based cross-sectional surveys. *Asian Journal of Psychiatry*, 44, 38-44. doi:10.1016/j.ajp.2019.07.011
- Vezzali, L., Andrighetto, L., Drury, J., Di Bernardo, G. A., & Cadamuro, A. (2017). In the aftermath of natural disasters: Fostering helping towards outgroup victims. In: van Leeuwen E., Zagefka H. (Eds), *Intergroup Helping* (pp. 305-330). Springer, Cham. doi:10.1007/978-3-319-53026-0_15
- Vezzali, L., Cadamuro, A., Versari, A., Giovannini, D., & Trifiletti, E. (2015). Feeling like a group after a natural disaster: Common ingroup identity and relations with outgroup victims among majority and minority young children. *British Journal of Social Psychology*, 54, 519-538. doi:10.1111/bjso.12091
- Vezzali, L., Drury, J., Cadamuro, A., & Versari, A. (2016). Sharing distress increases helping and contact intentions via one-group representation and inclusion of the other in the self: Children's prosocial behaviour after an earthquake. *Group Processes and Intergroup Relations*, 19, 314-327. doi:10.1177/1368430215590492
- Wasserstein, S. B., & La Greca, A. M. (1998). Hurricane Andrew: Parent conflict as a moderator of children's adjustment. *Hispanic Journal of Behavioral Sciences*, 20, 212-224. doi:10.1177/07399863980202005
- Weems, C. F., Pina, A. A., Costa, N. M., Watts, S. E., Taylor, L. K., & Cannon, M. F. (2007). Predisaster trait anxiety and negative affect predict posttraumatic stress in youths after Hurricane Katrina. *Journal of Consulting and Clinical Psychology*, 75, 154-159. doi:10.1037/0022-006x.75.1.154
- Williams, R., & Drury, J. (2010). The nature of psychosocial resilience and its significance for managing mass emergencies, disasters and terrorism. In: Awotona A. (Ed.), *Rebuilding*

sustainable communities for children and their families after disasters: A global survey (pp. 121-148). Newcastle-upon-Tyne, UK: Cambridge Scholars Publishing.

Wolmer L, Laor N, Yazgan Y. (2003). School reactivation programs after disaster: Could teachers serve as clinical mediators? *Child and Adolescent Psychiatric Clinics of North America*, 12, 363-381.

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

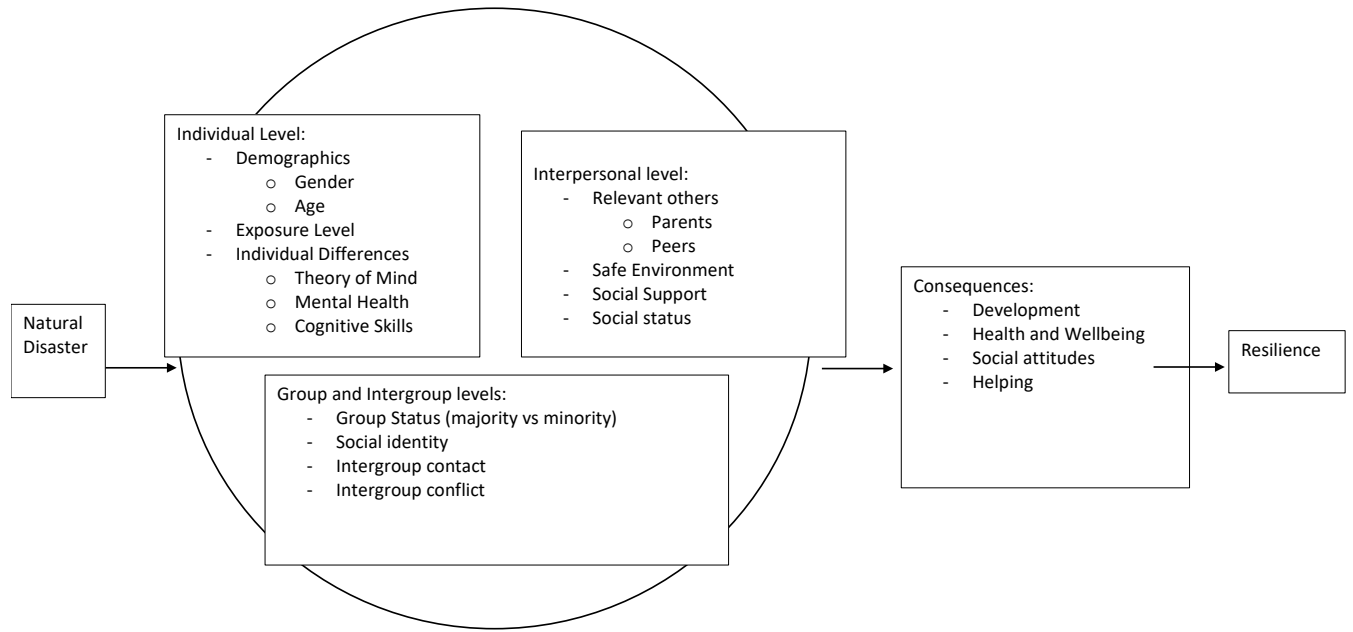


Figure 1. Proposed integrative model.

Online Supplementary Material

Figure 1 _OSM. Process followed in selecting articles for the review.

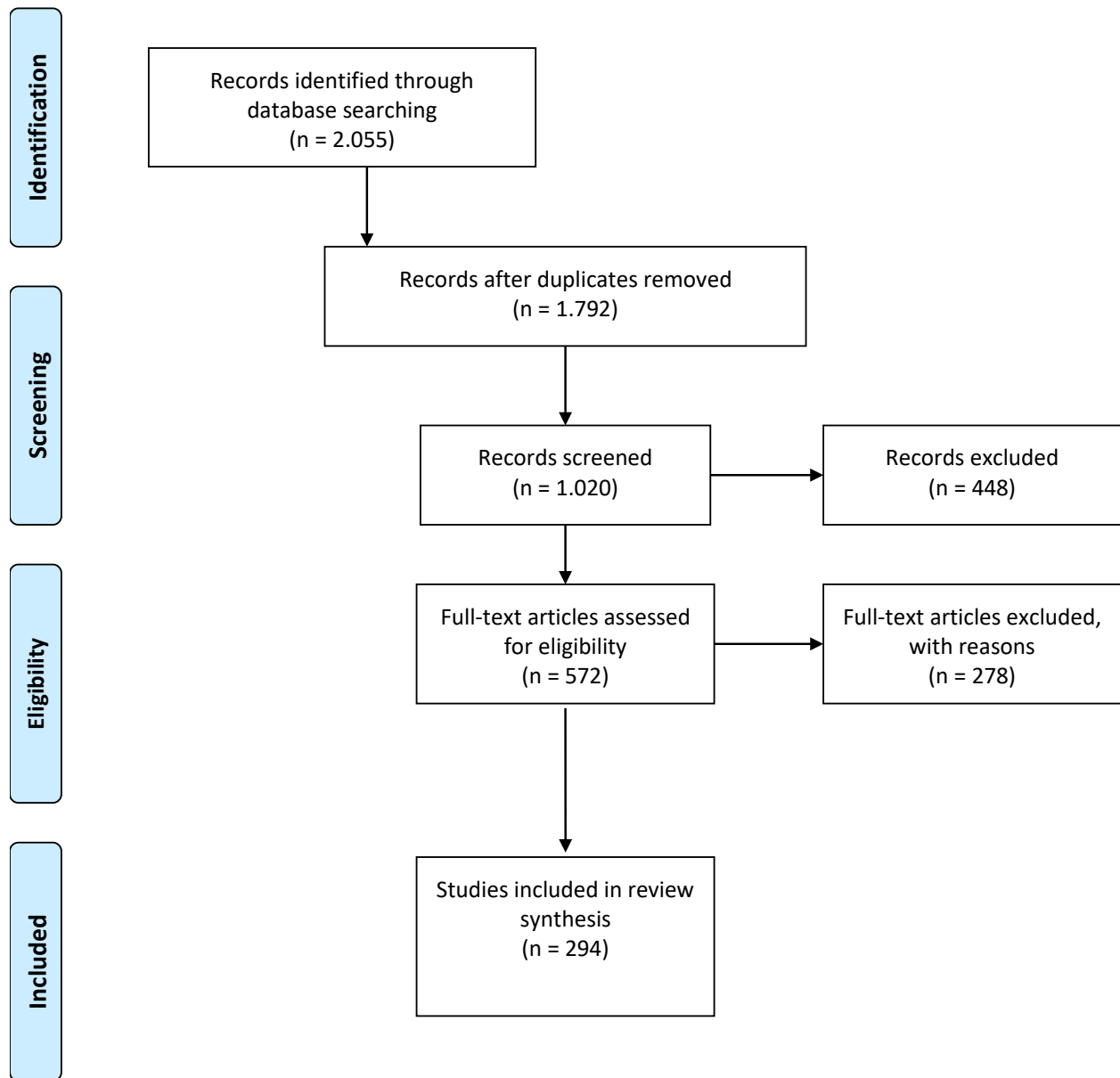


Table 1_OSM. Studies included in the Review (*N* = 294 studies)

Authors and year	Type of disaster (country)	Method	Level(s)	Population	Independent Variable(s)	Mediator(s)	Moderator(s)	Assessment(s) (months postdisaster)	Dependent Variable(s)
Adebäck, P., Schulman, A., & Nilsson, D. (2017).	Tsunami (Thailand)	Longitudinal	Individual	210 Swedish children aged 10-15 years	Disaster exposure, gender, age, education and living situation			8 years post disaster	PTSS, depression, anxiety thoughts or attempted suicide, physical symptoms or daily functioning
Agustini, E. N., Asniar, I., & Matsuo, H. (2011).	Tsunami (Indonesia)	Longitudinal	Individual and Interpersonal	482 adolescent aged 11-19 years	Gender, loss of parents, low support level and heavy somatic response age, school grade, traumatic experience			4.5 years post disaster	PTSD
Andrades, M., García, F. E., Calonge, I., & Martínez-Arias, R. (2018).	Earthquake (Chile)	Cross-sectional	Individual	325 children aged 10-15 years	Disaster exposure, age, gender, city of residence at the time of the earthquake,	Rumination		12 months post disaster	Posttraumatic Growth PTSD

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

					and city of current residence				
Andrades, M., García, F. E., Reyes-Reyes, A., Martínez-Arias, & R., Calonge, I. (2016).	Tsunami (Chile)	Cross-sectional	Individual	393 children aged 10-15 years	Disaster exposure age, gender, city of residence			20-30 months post disaster	Posttraumatic Growth PTSD
Anthony, J. L., Lonigan, C. J., & Hecht, S. A. (1999).	Hurricane (USA)	Cross-sectional	Individual	5664 children and adolescent aged 9-19 years	Anxiety, degree of disaster exposure			3 months post disaster	PTSD
Arnberg, F. K., Gudmundsdóttir, R., Butwicka, A., Fang, F., Lichtenstein, P., Hultman, C. M., & Valdimarsdóttir, U. A. (2015).	Tsunami (Sweden)	Longitudinal	Individual and Interpersonal	8762 adults 3742 children 864 088; unexposed adults; 320 828 unexposed children aged 12 years	Disaster exposure, pre-tsunami psychiatric disorders, age, gender, parental pre-tsunami disorders, socioeconomic characteristics			3 and 11 months post disaster (T1-T2) 23 and 60 months post disaster (T3-T4)	Psychiatric disorders suicide attempts
Asarnow, J., Glynn, S., Pynoos, R. S., Nahum, J., Guthrie, D., Cantwell, D. P., & Franklin, B. (1999).	Earthquake (USA)	Cross-sectional	Individual	63 children (8.59-18.60 years) Preselected for depression, attention-deficit	Disaster exposure, predisaster depression, predisaster anxiety disorder, pre disaster psychiatric disorder,			12 months post disaster	PTSD

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

				hyperactivity disorder and siblings not preselected for the presence of psychopathology	social impairment, coping strategies				
Austin, M-P., Christl, B., McMahon, C., Kildea, S., Reilly, N., Yin, C., Simcock, G., Elgbeili, G., Laplante, D. P., & King, S., (2017).	Flood (Australia)	Longitudinal	Individual and Interpersonal	131 families and 230 women	Prenatal maternal stress		Maternal emotional availability	12 months post disaster 16 and 30 months post-partum	Language and cognitive development
Ayub, M., Poongan, I., Masood, K., Gul, H., Ali, M., Farrukh, A., Shaheen, A., Chaudhry, H. & R., Naeem, F. (2012).	Earthquake (Pakistan)	Cross-sectional	Individual and Interpersonal	1100 children, aged 7-16 years	Age, gender, demographic, socioeconomic factors, family trauma related factors, psychological morbidity			18 months post disaster	PTSD and behavioural and emotional problems
Azarian, A., Miller, T. W., & Skriptchenko-Gregorian, V. (1996).	Earthquake (Armenia)	Cross-sectional	Individual	90 children aged 15-48 month	Disaster exposure, gender			6 months post disaster	Memory functioning Physical stimuli

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Azarian, A., Skriptchenko-Gregorian, V., Miller, T. W., & Kraus, R. F. (1994).	Earthquake (Armenia)	Cross-sectional	Individual	839 children aged 3-17 years	Disaster exposure			6 months post disaster	Emotional, somatic and behavioral symptoms
Bahrck, L. E., Parker, J. F., Fivush, R., & Levitt, M. (1998).	Hurricane (USA)	Cross-sectional	Individual	100 children aged 3-4 years	Disaster exposure, age			2-6 months post disaster	Young children's memory for a natural disaster
Bal, A. (2008).	Earthquake (Turkey)	Cross-sectional	Individual	293 children and adolescents aged 8-15 years	Disaster exposure, gender, age			3 years post disaster	PTSD
Bal, A., & Jensen, B. (2007).	Earthquake (Turkey)	Cross-sectional	Individual	293 children and adolescents aged 8-15 years	Disaster exposure, age, gender			3 years post disaster	PTSD
Bauer, P. J., Burch, M. M., Van Abbema, D. L., & Ackil, J. K. (2007).	Tornado (USA)	Cross-sectional	Individual	29 mother-child dyads aged 2.6–11.8 years	Disaster exposure, age			4 months and 10 months post disaster	Mother's and children's contributions
Bauer, P. J., Stark, E. N., Lukowski, A. F., Rademacher, J., Van Abbema, D. L., & Ackil, J. K. (2005).	Tornado (USA)	Longitudinal	Individual	29 mother-child dyads aged 2.6-11.8 years	Disaster exposure, age			4 months and 10 months post disaster	Mother and children use of internal states language

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Belter, R. W., Dunn, S. E., & Jeny, P. (1991).	Hurricane (USA)	Cross-sectional	Individual	260 children, aged 3-5 years	Disaster exposure, demographic information			5 months post disaster	Depression PTSD Adjustment
Bhushan, B., & Sathya- Kumar, J. (2007).	Tsunami (India)	Cross-sectional	Individual	130 children aged 10-16 years	Gender, age Type of family, loss of family members,			12 months post disaster	Emotional distress and posttraumatic stress in children
Blanc, J., Bui, E., Mouchenik, Y., Derivois, D., & Birmes, P. (2015).	Earthquake (Haiti)	Cross-sectional	Individual and Interpersonal	96 children aged 7-13 years	Social support vs no social support (control group)			12 months post disaster	PTSD and depression
Bödvarsdóttir, Í., Elklit, A, & Gudmundsdóttir, D. B. (2006).	Earthquake (Iceland)	Cross-sectional	Individual	67 exposed and 73 no exposed children aged 10-15 years	Disaster exposure, demographic information, stressors relating to the disaster, academic skills and behavioural adjustment in class, social support			3 months post disaster	PTSD Psychological distress
Bokszczanin, A. (2008).	Flood (Poland)	Cross-sectional	Individual and Interpersonal	533 children and adolescents age M = 15.96	Gender age place of residence, exposure to trauma		Parental support, family conflict, overprotectiveness	28 months post disaster	PTSD

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Bradburn, I. S. (1991).	Earthquake (USA)	Cross-sectional	Individual	22 children aged 10-12 years	Experience of and proximity to loss, family reactions previously traumatic event			6-8 months post disaster	PTSD
Brown, C. S., Mistry, R. S., & Bigler, R. S. (2007).	Hurricane (USA)	Cross-sectional	Individual and Intergroup	77 african americans children aged 6 -14 years	Attributions		Age victim group (race class) socialization	within 3 months post disaster	Type of attribution, aid and effectiveness of the government
Bulut, S. (2013).	Earthquake (Turkey)	Cross-sectional	Individual	191 children aged 12 years	Gender PTSD			12 months post disaster	Emotional and behavioral disorders
Bulut, S. (2006).	Earthquake (Turkey)	Cross-sectional	Individual	400 children aged 9-12 years	Disaster exposure			11 months post disaster	PTSD
Bulut, S., Bulut, S., & Tayli, A. (2005).	Earthquake (Turkey)	Cross-sectional	Individual	200 children 4th and 5th grade	High-impact trauma and low-impact trauma groups			11 months post disaster	PTSD
Burke Jr, J. D., Borus, J. F., Burns, B. J., Millstein, K. H., & Beasley, M. C. (1982).	Storm (USA)	Longitudinal	Individual	64 children age M = 6,5 years	Storm-related problems, age, time			6 months post disaster 5 months post disaster	Externalizing behaviour School Behavior Anxiety

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Burke Jr, J. D., Moccia, P., Borus, J. F., & Burns, B. J. (1986).	Flood (USA)	Cross-sectional	Individual	47 children 5th graders	Disaster exposure, flood vs no-flood, gender			10 months post disaster	Distress
Burnham, J. J., Hooper, L. M., Edwards, E. E., Tippey, J. M., McRaney, A. C., Morrison, M. A., ... & Woodroof, E. K. (2008).	Hurricane (USA)	Cross-sectional	Individual	98 children aged 6-12 years 147 children and adolescents aged 6-18 years	Age, gender, disaster exposure				Fears
Buthmann J, Finik J, Ventura G, Zhang W, Shereen AD, Nomura Y. (2019)	Storm (USA)	Cross-sectional	Individual Interpersonal	198 children, 3-4 years old	Maternal prenatal depression Prenatal exposure to the disaster Ethnicity Maternal anxiety and PTSD Maternal education and marital status			4 years after storm	Electrodermal activity
Buthmann, J., Ham, J., Davey, K., Finik, J., Dana, K., Pehme, P., ... Nomura, Y. (2018)	Storm (USA)	Cross-sectional	Individual Interpersonal	380 pregnant women 380 children, 6 months old	Maternal state anxiety, stressful life events, prenatal depression, postnatal depression, the number of birth			before, during and 6 months after storm	Child Temperament (Negative Affect, Emotion Regulation, and Surgency)

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

					complications, maternal age, parity, education attainment, endocrine disorders and infections. Child birthweight gestational age at birth, sex Objective and subjective disaster-related stress, and gestational timing of exposure				
Cadamuro, A., Versari, A., Vezzali, L., & Trifiletti, E. (2016).	Earthquake (Italy)	Cross-sectional	Individual and Interpersonal	147 children, aged 6-8 years, 294 parent's	Parent's posttraumatic stress symptoms	Children's posttraumatic stress symptoms	ToM Abilities	6 months post disaster	Negative Coping
Cadamuro, A., Versari, A., Vezzali, L., Giovannini, D., & Trifiletti, E. (2015).	Earthquake (Italy)	Cross-sectional	Individual and Interpersonal	517 elementary school children aged 7-12 years	Coping styles	Theory of mind	Social support	6 months post disaster	Cognitive Performance
Cao, X., Laplante, D.	Ice Storm	Cross-sectional	Individual and	89 children	Maternal distress,			5 years post disaster	Neuromotor function

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

P., Brunet, A., Ciampi, A., & King, S. (2014).	(Canada)		Interpersonal	age M = 5,5 years and their mothers	timing of exposure, level of exposure, major life events, gender, trimester of pregnancy, socioeconomic status				
Catani, C., Gewirtz, A. H., Wieling, E., Schauer, E., Elbert, T., & Neuner, F. (2010).	Tsunami, War and Family Violence (4 Studies) (Sri Lanka)	Cross-sectional	Individual	1398 children aged 9-15 years	Severity of disaster exposure, economic status, family loss, war experiences, family violence, exposure to other traumatic experiences, multiplicity of risks			1 month post disaster (study 3) and 12 months post disaster (study 4)	Adaptation score (Physical Health, Functioning, Mental Health, School performance)
Celebi Oncu, E., & Metindogan Wise, A. (2010).	Earthquake (Turkey)	Experimental (with control group)	Individual	103 children aged 9 years	Disaster exposure, group,		Gender	20 months post disaster	Trauma-related symptoms
Celebi Oncu, E., Akman, B., Guler, T., & Karaaslan, T. (2009).	Earthquake (Turkey)	Cross-Sectional	Individual	64 children aged 6 years	Disaster exposure				Emotions in drawings
Cénat, J. M., & Derivois, D. (2015).	Earthquake (Haiti)	Cross-sectional	Individual	872 children aged 7-17 years	Peritraumatic distress,				PTSD Depression

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

					disaster exposure, socio-demographic characteristics				
Chen, J., & Wu, X. (2017).	Earthquake (China)	Longitudinal	Individual	757 children 9- 16 years old	Gender Age Educational level Disaster Exposure			between 8 and 20 months after the earthquake	Posttraumatic stress disorder (PTSD) and posttraumatic growth (PTG)
Chen, W., Wang, L., Zhang, X. L., & Shi, J. N. (2012).	Earthquake (China)	Cross-sectional	Individual	156 children age M= 11 years	Disaster exposure, emotional focus, coping strategy	Emotional coping strategy Self-esteem		6 months post disaster	PTSS
Cheng, J., Liang, Y., Fu, L. & Liu, Z. (2018)	Earthquake (China)	Longitudinal	Individual and Interpersonal	301 children aged 9.6- 14.6 years	Disaster exposure, gender, grade, parental relationship, PTSD and depression (T1, T2, T3)			4-29 months post disaster (T1-T2) 40-52 months post disaster	PTSD Depression and comorbidity
Cheng, J., Liang, Y.-M., Zhou, Y.-Y., Eli, B., & Liu, Z.-K. (2019)	Earthquake (China)	Longitudinal	Individual Interpersonal	304 children, 9- 17 years old	Trauma exposure Quality Parental relationships Grade Gender Social support			1.5, 6, 12, 24 and 48 months after the earthquake	PTSD

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Cobham, V. E., & McDermott, B. (2014).	Cyclone (Australia)	Cross-sectional	Individual and Interpersonal	874 children aged 8–12 years and their parent’s	Parent’s altered parenting, parental disaster-related distress, children disaster exposure, child age, child gender			3 months post disaster	PTSS
Cryder, C. H., Kilmer, R. P., Tedeschi, R. G., & Calhoun, L. G. (2006).	Flood (USA)	Cross-sectional	Individual and Interpersonal	56 children aged 6-15 years	Social support, disaster exposure	Competency beliefs		1 year post disaster	Posttraumatic growth
Danielson, C. K., Cohen, J. R., Adams, Z. W., Youngstrom, E. A., Soltis, K., Amstadter, A. B., & Ruggiero, K. J. (2016)	Tornado (USA)	Cross-sectional	Individual Intepersonal	352 children 12-17 years old	Disaster Impact Social Support Parent-child conflict Trauma History Distress Tolerance Risk-Taking Substance Use Depression Sex Age			9 months after tornado	PTSD
Danzi, B. A., & La Greca, A. M. (2017).	Hurricane (USA)	Cross-sectional	Individual	327 children aged 7-11 years	Gender, age, race/ethnicity, disaster exposure,			8 months post disaster	PTSD

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

					hurricane related life stressors, impairment				
Dass-Brailsford, P., Thomley, R. S. H., Talisman, N. W., & Unverferth, K. (2015).	Earthquake (Haiti)	Cross-sectional	Individual	59 children aged 9-12 years	Distance from the epicenter (urban vs. rural), children displayed or not			12 months post disaster	Psychological consequences (depression, anxiety, and trauma)
Dawson, K. S., Joscelyne, A., Meijer, C., Tampubolon, A., Steel, Z., & Bryant, R. A. (2014).	Tsunami (Indonesia)	Cross-sectional	Individual	110 children aged 7-13 years	Religious belief, disaster exposure, cognitive avoidance, age			5 years post disaster	PTSD, depression, grief
Delamater, A. M., & Applegate, E. B. (1999).	Hurricane (USA)	Longitudinal	Individual	175 children aged 3-5 years	Disaster exposure, PTSD, age, gender, ethnic status, marital status, and highest grade completed by mothers			12 and 18 months post disaster	Child Development
Demir, T., Demir, D. E., Alkas, L., Copur, M., Dogangun, B.,	Earthquake (Turkey)	Cross-sectional	Individual	321 children and adolescents aged 2-15 years	Gender, age, location where the earthquake			1-155 days post disaster	PTSD, acute stress disorder adjustment disorder

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

& Kayaalp, L. (2010).					was experience, degree of losses, bodily injuries, damage to the residence				
Derivois, D., Cénat, J. M., Joseph, N. E., Karray, A., & Chahraoui, K. (2017).	Earthquake (Haiti)	Cross-sectional	Individual	128 children and adolescents aged 7-18 years (living on the streets)	Age, gender, disaster exposure, life events, peritraumatic distress, reason for living in the street			4 years post disaster	PTSD, anxiety depression
Derivois, D., Mérisier, G. G., Cénat, J. M., & Castelot, V. (2014).	Earthquake (Haiti)	Cross-sectional	Individual and Interpersonal	540 children and adolescents aged 2-18 years	Age, gender, level of education, religion, health conditions, trauma exposure, others traumatic events, post-earthquake situation and the peritraumatic distress, social support			16 to 18 months post disaster	PTSD
Dollinger, S. J. (1985).	Lightning-Strike (USA)	Longitudinal	Individual and Interpersonal	38 children aged 10-12 years	Gender, race			1 months post incident	Emotional effects

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

								9 months post incident (T2)	Adjustment reactions Sleep disturbance.
Dollinger, S. J. (1986).	Lightning-Strike (USA)	Cross-sectional	Individual	38 children aged 10–12 years	Disaster exposure, fears of storms, death and dying, separation from parents			1-2 months post incident	Sleep disturbances and somatic complaints
Dollinger, S. J., O'donnell, J. P., & Staley, A. A. (1984).	Lightning-Strike (USA)	Cross-sectional	Individual and Interpersonal	87 children aged 10-13 years	Age, gender, socio economics status, disaster exposure, fears of storms, separation from parents, death and dying			1-2 months post incident	Sleep disturbances and somatic complaints
Durkin, M. S., Khan, N., Davidson, L. L., Zaman, S. S., & Stein, Z. A. (1993).	Flood (Bangladesh)	Pre post (without control group)	Individual	2667 children aged 2-9 years, (pre disaster) 162 children (post disaster)	Disaster exposure			6 months pre disaster 5 months post disaster	Behavioural disorders in children

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Dyb, G., Jensen, T. K., & Nygaard, E. (2011).	Tsunami (Southeast Asia)	Cross-sectional	Individual and Interpersonal	319 parents and adolescents aged 6–18 years	Disaster exposure (parents and child), parent's level of posttraumatic stress		Parental PTSD	6–8 months post tsunami	PTSD
Earls, F., Smith, E., Reich, W., & Jung, K. G. (1988).	Flood (USA)	Cross-sectional	Individual and Interpersonal	Parents and 32 children and adolescent aged 6-17 years	Disaster exposure, preexisting psychiatric disorders, parent's reactions to the flood			12 months post disaster	PTSS
Ekşi, A., Braun, K. L., Ertem-Vehid, H., Peykerli, G., Saydam, R., Toparlak, D., & Alyanak, B. (2007).	Earthquake (Turkey)	Cross-sectional	Individual and Interpersonal	160 children and adolescents aged 9-18 years	Demographic characteristics, ethnic, religious background, occupation of parents, (1) pre-disaster factors: gender, age, trait anxiety score, and pre-existing family problems (2) disaster factors:			6-20 weeks post disaster	PTSD depression

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

					injured, family member injured, lost (3) post-disaster response factors: reaction, feelings, relocation				
Endo, T., Shioiri, T., Someya, T., Toyabe, S., & Akazawa, K. (2007).	Earthquake (Japan)	Cross-sectional	Individual and Interpersonal	756 children including 170 pre-school (<7 years old) and 586 school-children (>7 years old)	Demographic information, parents and children's physical state after the earthquake (injury and illness), damage to house			5 months post disaster	Behavioral changes in children
Evans, L. G., & Oehler-Stinnett, J. (2006).	Tornado (USA)	Cross-sectional	Individual	152 children aged 6-12 years	Age, gender, ethnicity, disaster exposure			1-year post disaster	PTSD
Evans, L. G., & Oehler-Stinnett, J. (2008).	Tornado (USA)	Cross-sectional	Individual	88 children aged 7-12 years	Age, gender, ethnicity, disaster exposure, PTSD				PTSD Internalizing symptoms and adjustment
Exenberger, S., Ramalingam, P., & Höfer, S. (2016).	Tsunami (Southeast Asia)	Cross-sectional	Individual	177 South Indian children aged 8-17 years	PTSS, growth, gender, age			4 years post disaster	Posttraumatic Growth (PTG) PTSD

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Exenberger, S., Riedl, D., Rangaramanujam, K., Amirtharaj, V., & Juen, F. (2019)	Tsunami (India)	Cross-sectional	Individual and Intepersonal	80 mothers and 164 children 8 - 17 years old	mother's PTSD symptoms living arrangement age, gender religion			4 years post tsunami	PTSD
Fan, F., Long, K., Zhou, Y., Zheng, Y., & Liu, X. (2015).	Earthquake (China)	Longitudinal	Individual and Interpersonal	1573 adolescents aged 12-16 years	Demographics, disaster exposure, exposure, gender, age, severity of negative life events, social support, coping style			6 months post disaster (T1) 12 months post disaster (T2) 24 months post disaster (T3)	PTSD
Felix, E. D., You, S. K., & Canino, G. (2013).	Hurricane (Puerto Rico)	Cross-sectional	Individual and Interpersonal	1637 children and adolescents aged 6 -17 years and parents	3 age groups, gender, perception of poverty, disaster exposure, school violence, teacher's attitudes, neighborhood climate, neighborhood monitoring, community violence, violence exposure		School microsystems (violence), Poor teacher attitudes, Community characteristics (neighborhood climate)	12-27 months post disaster	Internalizing psychopathology

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Felix, E. D., You, S., & Canino, G. (2015)	Hurricane (Puerto Rico)	Cross-sectional	Individual and Interpersonal	582 children aged 4-10 years and adolescent aged 4-17 years	Family environment , disaster exposure, parent-child relationship quality, age	Family environment Parent relationship quality (mediated for adolescents)		18 months post disaster	Ataques de nervios
Felix, E., Hernández, L. A., Bravo, M., Ramirez, R., Cabiya, J., & Canino, G. (2011).	Hurricane (Puerto Rico)	Longitudinal	Individual	1886 children (T1) 1788 children (T2) aged 4-17 years	Disaster exposure, gender		Age	18-30 months post disaster	Internalizing, externalizing
Felix, E., Kaniasty, K., You, S., & Canino, G. (2015).	Hurricane (Puerto Rico)	Cross-sectional	Individual and Interpersonal	1886 parent-child dyads aged 4-17 years	economic status, age, exposure time, parent-child, relationship quality		Parent-Child Relationship Quality	18-30 months post disaster	Physical health
Felix, E., You, S., Vernberg, E., & Canino, G. (2013).	Hurricane (Puerto Rico)	Cross-sectional	Individual and Interpersonal	1886 dyads Two ages groups: 4-10 and 11-17	Disaster exposure, age	Family Environment., Parent-child relationship quality	Parental history of mental health problem	18 months post disaster	Psychopathology: internalizing disorder in children

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Felton, J. W., Cole, D. A., & Martin, N. C. (2013).	Flood (USA)	Pre-post (without control group)	Individual	239 students aged 10-15 years	preflood rumination, depressive symptoms, flood-related experiences	Preflood rumination Preflood depression	Age	6 months pre-disaster (T1) 10 days post disaster (T2)	Depressive Reactions Postflood rumination Postflood depression
Feo, P., Di Gioia, S., Carloni, E., Vitiello, B., Tozzi, A. E., & Vicari, S. (2014).	Earthquake (Italy)	Cross-sectional	Individual and Interpersonal	1839 children aged 3-14 years	socio-demographic, health, family data, proximity to the epicentre, damages to the house, internally displaced condition. parent's loss of job, gender, age			12 to 17 months post disaster	Psychiatric symptoms
Fivush, R., McDermott Sales, J., Goldberg, A., Bahrick, L., & Parker, J. (2004).	Hurricane (USA)	Longitudinal	Individual	100 children aged 3-4 years	Time, stress group, phase of hurricane			Few months post disaster (T1) 6 years post disaster (T2)	Recall of Hurricane
Foa, E. B., Johnson, K. M., Feeny, N. C., & Treadwell, K. R. (2001).	Earthquake (USA)	Cross-sectional	Individual	75 children aged 8-15 years	Age, gender			2 years post disaster	PTSD Depression Anxiety
Fujiwara, T., Mizuki, R., Miki, T., &	Earthquake (Japan)	Cross-sectional	Individual	23 children aged 6-8 years	Children's facial emotion reactivity				PTSD

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Chemtob, C. (2015).					while watching video, number of disaster experiences, age, gender				
Fujiwara, T., Yagi, J., Homma, H., Mashiko, H., Nagao, K., Okuyama, M., ... & Children Study Team. (2017).	Earthquake / Tsunami (Japan)	Longitudinal	Individual and Interpersonal	490 children aged 5-8 years	Disaster exposure, maternal psychological distress, number of trauma events, parenting practice, gender, time	Depression in mother and children		2 years post disaster (T1) 3 years post disaster (T2)	Suicide risk
Fujiwara, T., Yagi, J., Homma, H., Mashiko, H., Nagao, K., Okuyama, M., (2017).	Earthquake (Japan)	Longitudinal	Individual	280 children aged 5-8 years	Age, gender, disaster exposure, number of earthquake-related events, exposure to other trauma before the earthquake, clinical problems, economic status	Depression in mother and children Parenting practice		2 years post disaster (T1) 3 years Post disaster (T2)	Suicide risk
Galante, R., & Foa, D. (1986).	Earthquake (Italy)	Experimental pre-post (with control group)	Individual	300 children 4 th -6 th grade	Disaster exposure, treatment: gradual series of			6 months (T1) 18 months post disaster	Risk for developing neurotic or antisocial problems

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

					steps that led to a replaying of the earthquake			(1 after pretesting)	
Garrison, C. Z., Bryant, E. S., Addy, C. L., Spurrier, P. G., Freedy, J. R., & Kilpatrick, D. G. (1995).	Hurricane (Florida)	Cross-sectional	Individual, Interpersonal and Intergroup	370 parent-adolescent pairs: 158 hispanics, 116 black 104 white aged 12-17 years	Disaster exposure, gender, ethnicity, household income, lifetime exposure to undesirable events parent fear, parent PTSD symptoms			6 months post hurricane	PTSD
Ge, F., Yuan, M., Li, Y., Zhang, J., & Zhang, W. (2019)	Earthquake (China)	Longitudinal	Individual	1623 primary and secondary school children	socio-demographic characteristics PTSD			2 weeks, 3 months and 6 months after the earthquake	PTSD
Giannopoulou, I., Smith, P., Ecker, C., Strouthos, M., Dikaiakou, A., & Yule, W. (2006).	Earthquake (Greece)	Cross-sectional	Individual	2037 children and adolescents, aged 9-17 years	Age, gender			6-7 months post disaster	Post-traumatic stress reactions. PTSD
Giannopoulou, I., Strouthos, M., Smith, P., Dikaiakou, A., Galanopoulou	Earthquake (Greece)	Cross-sectional	Individual	2037 children and adolescents aged 9-17 years	Different types of exposure, objective and subjective			6-7 months post disaster	PTSD, anxiety and depression symptoms

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

, V., & Yule, W. (2006).					aspects of exposure to the earthquake, age, gender				
Gil-Rivas, V., & Kilmer, R. P. (2013).	Hurricane (USA)	Longitudinal	Individual and Interpersonal	68 caregiver-child dyads age M= 8.5 years	Caregiver PTSS and depressive symptoms, coping advice, child perceptions of caregiver distress, unavailability, warmth, caregiver-child conflict			12 months post disaster (T1) 6-10 months later (T2)	PTSS depressive symptoms
Goenjian, A. K., Pynoos, R. S., Steinberg, A. M., Najarian, L. M., Asarnow, J. R., Karayan, I., ... & Fairbanks, L. A. (1995).	Earthquake (Armenia)	Cross-sectional	Individual	218 children Spirak (n = 63, M=13.7) Gumri (n = 94, M=13,1) Yerevan (n = 61, M=12.1)	Age, gender, disaster exposure, extent of loss of relatives and destruction of residence			18 months post disaster	PTSD depression separation anxiety disorder
Goenjian, A. K., Walling, D., Steinberg, A. M., Roussos, A.,	Earthquake (Armenia)	Cross-sectional	Individual	48 parentally bereaved adolescents and	Parentally bereaved and a comparison group after a			Six and an half year post disaster	Depression and PTSD symptoms

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Goenjian, H. A., & Pynoos, R. S. (2009).				44 subjects with no parental loss, aged 11-16 years	catastrophic natural disaster, loss of both parents, loss of father, loss of mother, no parental loss				
Gökçen, C., Şahingöz, M., & Annagür, B. B. (2013).	Earthquake (Turkey)	Cross-sectional	Individual and Interpersonal	450 children aged 12-14 years	Gender, family type (traditional or core), previous traumatic experience personal, family history of psychiatric disorders			6 months post disaster	PTSD
Gomez, C. J., & Yoshikawa, H. (2017).	Earthquake (Chile)	Experimental (with control group)	Individual and Interpersonal	698 children exposed and 720 children no-exposed aged 53 months	Disaster exposure, earthquake related stressors, gender, age, parent's education, child prior experience in an early education setting, socio-economic status,			3-12 weeks post disaster	Cognitive function skills Early language, pre-literacy, mathematics and executive function outcomes

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

					classroom-level teacher's, parent's earthquake related-stressors				
Green, B. L., Korol, M., Grace, M. C., Vary, M. G., Leonard, A. C., Gleser, G. C., & Smitson-Cohen, S. (1991).	Flood (USA)	Cross-sectional	Individual and Interpersonal	179 children aged 2-15 years	Age, gender, disaster exposure, parental functioning, family atmosphere			2 years post disaster	PTSD
Groome, D., & Soureti, A. (2004).	Earthquake (Greece)	Cross-sectional	Individual	178 children aged 9-14 years	Proximity to the epicentre, exposure to threat, gender, age			5 months post disaster	PTSD Anxiety
Hafstad, G. S., Gil-Rivas, V., Kilmer, R. P., & Raeder, S. (2010).	Tsunami (Thailand)	Longitudinal	Individual and Interpersonal	105 norwegian children aged 6-17 years and their parents (N = 67)	Subjective exposure and concurrent PTSS, objective exposure, parent ptg			6 months post disaster (T1), 10 months (T2), 2,5 years post disaster (T3)	Posttraumatic Growth
Hafstad, G. S., Kilmer, R. P., & Gil-Rivas, V. (2011).	Tsunami (Southeast Asia)	Longitudinal	Individual	105 norwegian children aged 6-17 years	Age gender prior adversity exposure objective tsunami-			10 and 30 months post disaster	Posttraumatic Growth

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

					related exposure subjective tsunami-related reactions, tsunami-related traumatic events, post traumatic symptoms				
Hall, A., & Kirby, H. (2010).	Earthquake (Pakistan)	Cross-sectional	Individual and Interpersonal	2032 children 5–14 years	Age, gender, enrolment status, socio-economic characteristics			12 months post disaster	Health and nutritional status
Hambrick, E. P., O'connor, B. M., & Vernberg, E. M. (2016).	Tornado (USA)	Longitudinal	Individual	50 children aged 8-12 years	Disaster exposure, life-threatening experiences, disruptive life experiences during and after the tornado, PTSS severity, time			12 months post disaster (T1) 3 monthsh after (T2)	Happiness, upset and nervousness Perceptions of research
Hambrick, E. P., Vernberg, E. M., Greenhoot, A. F., &	Tornado (USA)	Cross-sectional	Individual	50 children 8-12 year-olds and their mothers	Children's processing in trauma recollections ,			1 week after tornado	PTSD, depression, and anxiety

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Hendrickson, M. L. (2017)					level of exposure, Family income, Age Gender Verbal ability				
Han, L., Zhang, Y., & Zheng, Y. (2012).	Earthquake (China)	Longitudinal	Individual	188 children aged 11-15 years	Time, gender			2 weeks and 12 months post disaster	Mental health and coping styles
Hansel, T. C., Osofsky, J. D., Osofsky, H. J., & Friedrich, P. (2013).	Hurricane (USA)	Cross-sectional	Individual	795 children and adolescents (5 th -12 th grades)	Age (3 groups), relocation groupings, disaster exposure			4 years post disaster	Longer-term psychological symptoms: trauma, depression, and posttraumatic stress
Hausman, E. M., Black, S. R., Bromet, E., Carlson, G., Danzig, A., Kotov, R., & Klein, D. N. (2020)	Hurricane (U.S.A.)	Longitudinal	Individual Intepersonal	347 pairs mother-child 9 years old	Family's stress exposure Predisaster symptom			1 year before hurricane,. 8 weeks after the hurricane	depression anxiety
Hensley-Maloney, L., & Varela, R. E. (2009).	Hurricane (USA)	Cross-sectional	Individual	302 children 6th and 7th graders (T1) 110 children 6th and 7th graders (T2)	Anxiety sensitivity, gender		Trauma exposure	5–8 months post disaster (T1) 17–18 months post disaster (T2)	Panic symptoms

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Hizli, F. G., Taskintuna, N., Isikli, S., Kilic, C., & Zileli, L. (2009).	Earthquake (Turkey)	Cross-sectional	Individual and Interpersonal	1999 children and adolescents, aged 8-18 years	Socio-demographic characteristics, loss of source, and loss of social support, fear and avoidance, post-earthquake life events, impact of earthquake			4 years post disaster	PTSD Depression
Hlodversdottir, H., Thorsteinsdottir, H., Thordardottir, E. B., Njardvik, U., Petursdottir, G., & Hauksdottir, A. (2018)	Volcanic eruption (Iceland)	Cross-sectional	Individual Interpersonal	1615 adult and their children	exposure level gender age education level marital status house damage Parental mental health			6–9 months after the eruption 3 years after eruption	physical and mental health symptoms
Houlihan, D., Ries, B. J., Polusny, M. A., & Hanson, C. N. (2008).	Tornado (USA)	Cross-sectional	Individual	95 students 3 rd - 12 th grade	Disaster exposure, home relocation, PTSD symptoms			5-6 weeks post disaster	Level of life satisfaction Total behavior problems

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

									Internalizing behaviors, and externalizing behaviors
Hsu, C. C., Chong, M. Y., Yang, P., & Yen, C. F. (2002).	Earthquake (Taiwan)	Cross-sectional	Individual	323 adolescents aged 12-14 years	Disaster exposure, PTSD			6 weeks post disaster	PTSD
Huzziff, C. A., & Ronan, K. R. (1999).	Eruptions (New Zealand)	Longitudinal	Individual and Interpersonal	187 students age M=10 years	PTSD. disaster exposure, demographics, home factors, negative, cognitive and emotional style coping, time			1 month post-disaster 3 months post-disaster	Coping
Itagaki, S., Harigane, M., Maeda, M., Yasumura, S., Suzuki, Y., Mashiko, H., ... & Mental Health Group of the Fukushima Health Management Survey. (2017).	Earthquake (Japan)	Cross-sectional	Individual	10824 children aged 6-15 years	Gender, age, place of residence, exercise category, treatment for illnesses and experienced the nuclear reactor accident			12 months post disaster	Mental health

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Iwadare, Y., Usami, M., Suzuki, Y., Ushijima, H., Tanaka, T., Watanabe, K., ... & Saito, K. (2014).	Earthquake and Tsunami (Japan)	Longitudinal	Individual	3795 children (5 th -6 th grades) and adolescents (8 th -9 th grades)	Age, gender, degree of disaster experienced			8-20 months post disaster	Posttraumatic symptoms
Jeney-Gammon, P., Daugherty, T. K., Finch Jr, A. J., Belter, R. W., & Foster, K. Y. (1993).	Hurricane (USA)	Cross-sectional	Individual and Interpersonal	257 children 3 rd - 5 th grade	Children's coping styles, cognitive restructuring, seeking social support, social withdrawal, self-blame, emotional regulation			5 months post disaster	Depressive symptoms
Jia, Z., Tian, W., He, X., Liu, W., Jin, C., & Ding, H. (2010).	Earthquake (China)	Cross-sectional	Individual	596 children aged 8-16 years	Disaster exposure, utilization of mental health services, health-related quality of life			15 months post disaster	Mental health and quality of life
Jieling, C., & Xinchun, W. (2017).	Earthquake (China)	Cross-sectional	Individual and Interpersonal	618 participants (aged M=12.26)	Disaster exposure, social support			8 months post disaster	Post-traumatic stress symptoms. Post-traumatic growth

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Jones, R. T., Frary, R., Cunningham, P., Weddle, J. D., & Kaiser, L. (2001).	Hurricane (USA)	Cross-sectional	Individual	142 elementary school children aged 8-11 years, 69 adolescents aged 12-15 years	Gender, age and race appraisal of the severity of the event, life threat, loss/injury factor			6 months post disaster	Psychological effects: intrusion and avoidance
Jurgens, J. J., Houlihan, D., & Schwartz, C. (1996).	Tornado (USA)	Cross-sectional	Individual	62 adolescents 12-18 years	School relocation, disaster exposure, age			3 months post disaster	PTSD Self efficacy Future orientation Academic achievement
Juth, V., Silver, R. C., Seyle, D. C., Widyatmoko, C. S., & Tan, E. T. (2015).	Earthquake (Indonesia)	Cross-sectional	Individual and Interpersonal	397 parent-child dyads aged 8-17 years	Disaster exposure, parent's pts symptoms, children's pts symptoms		Parent's or children's genders	3 years post disaster	Children and Parent's psychological distress
Kalantari, M., & Vostanis, P. (2010).	Earthquake (Iran)	Cross-sectional	Individual and Interpersonal	166 children aged 7-13 years	Parental loss vs intact families, parent's psychopathology, gender, age, socioeconomic status,			4 years post disaster	Behavioural and emotional problems

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

					housing status				
Kar, N., Mohapatra, P. K., Nayak, K. C., Pattanaik, P., Swain, S. P., & Kar, H. C. (2007).	Cyclone (India)	Cross-sectional	Individual and Interpersonal	447 children aged 7-17 years	Disaster exposure, educational level, socioeconomic status, disaster related experiences			12 months post disaster	PTSD
Kelley, M. L., Self-Brown, S., Le, B., Bosson, J. V., Hernandez, B. C., & Gordon, A. T. (2010).	Hurricane (USA)	Longitudinal	Individual and Interpersonal	381 children aged 8-16 years and parent	Disaster exposure, levels of child PTSD at T1	parent distress and negative parenting practices,		3-7 months post disaster (T1) 4-17 months (T2) post-disaster	PTSD risk
Kessel, E. M., Nelson, B. D., Finsaas, M., Kujawa, A., Meyer, A., Bromet, E., ... Klein, D. N. (2019)	Hurricane (USA)	Cross-sectional	Individual Interpersonal	74 children, 9 years old	parenting styles and hurricane-related stress			8 months before 6 weeks and 9 months after Hurricane	neural reactivity
Kessel, E. M., Nelson, B. D., Kujawa, A., Hajcak, G., Kotov, R., Bromet, E. J., ... & Klein, D. N. (2018).	Hurricane (USA)	Pre-post (without control group)	Individual	77 children aged 9 years	Disaster exposure			8 months pre disaster 9 months post disaster	Neural Reactivity to negative stimuli
Kiliç, C., Kiliç, E. Z., & Aydın, I. O. (2011).	Earthquake (Turkey)	Cross-sectional	Individual and Interpersonal	104 children aged 8-15 years and parents	Parental psychopathology, disaster exposure			4 years post disaster	Traumatic stress and depression

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Kılıç, E. Z., Kılıç, C., & Yılmaz, S. (2008).	Earthquake (Turkey)	Cross-sectional	Individual	102 children aged 8-15 years	Anxiety sensitivity, disaster exposure, age, gender			5 years post disaster	PTSD
Kılıç, E. Z., Özgüven, H. D., & Sayil, I. (2003).	Earthquake (Turkey)	Cross-sectional	Individual and Interpersonal	49 children aged 7-14 years 35 mothers and 35 fathers	Parental psychopathology and family functioning, age, gender, general health, depression, PTSD of parents, pre-existing vulnerability factors			6 months post disaster	PTSD, depression anxiety
King, L. S., Osofsky, J. D., Osofsky, H. J., Weems, C. F., Hansel, T. C., & Fassnacht, G. M. (2015).	Hurricane Oil Spill (USA)	Longitudinal	Individual and Interpersonal	4154 children and adolescents aged 8-18 years	Age, gender, minority status, disaster exposure, oil spill stress lifetime trauma and loss			6 years post disaster 1 year post oil spill	PTS
King, S., & Laplante, D. P. (2005).	Ice Storm (Canada)	Cross-sectional	Individual and Interpersonal	141 children aged 2 years	Time of exposure, prenatal exposure, prenatal maternal stress level			2 years post disaster	Intellectual, language and functional play development
Kiser, L., Heston, J., Hickerson, S., Millsap, P.,	Earthquake (USA)	Pre-post (without control group)	Individual	416 Children (3 rd graders) and adolescents	PTSD, disaster exposure			Before disaster (T1)	PTSD

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Nunn, W., & Pruitt, D. (1993).				(10 th graders)				6-8 weeks post disaster (T2)	
Knight, L. A., & Sullivan, M. A. (2006).	Tornado (USA)	Cross-sectional	Individual	52 children, aged 8-12 years	Disaster exposure, trauma attribution			12 Months post disaster	PTSD
Kolaitis, G., Kotsopoulos, J., Tsiantis, J., Haritaki, S., Rigizou, F., Zacharaki, L., ... & Liakopoulou, M. (2003).	Earthquake (Greece)	Cross-sectional	Individual	163 children, 4 th - 5 th - 6 th grades	Disaster exposure, gender, native vs. immigrant status, where the child was at the time of the earthquake, child injured, others injured, property damage, previous disaster exposure, age, education level of the father, mother's reaction			6 Months post disaster	PTSD Depression Anxiety
Kopala-Sibley, D. C., Danzig, A. P., Kotov, R., Bromet, E. J., Carlson, G. A., Olino, T. M., ... &	Hurricane (USA)	Pre-post (without control group)	Individual	332 children aged 3 years	Disaster exposure, temperament		Early childhood temperament negative emotionality and its facets Temperament	7 years pre disaster 6 years post disaster	Depression and anxiety symptoms

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Klein, D. N. (2016).									
Kreuger, L., & Stretch, J. (2003).	Flood (USA)	Experimental (without control group)	Individual	3876 children and adolescents 4 th - 5 th and 12 th grades	Disaster exposure, stayed/evacuated residence, ability of family to recover				PTSD
Kronenberg, M. E., Hansel, T. C., Brennan, A. M., Osofsky, H. J., Osofsky, J. D., & Lawrason, B. (2010).	Hurricane (USA)	Longitudinal	Individual	387 children aged 9-18 years	Time, disaster exposure, gender, age, life stressor			2-3 years post disaster	Outcome Trajectories Depression PTSD
Kroska, E. B., O'Hara, M. W., Elgbeili, G., Hart, K. J., Laplante, D. P., Dancause, K. N., & King, S. (2018).	Flood (USA)	Cross-sectional	Individual Interpersonal	103 mothers who were pregnant when disastrous occurred	Prenatal maternal stress, cognitive appraisal of the flood consequences, timing of in utero exposure maternal depression	Offspring birthweight	Social support	30 months post disaster	Childhood body mass index

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Küçüköğlü, S., Yıldırım, N., & Dursun, O. B. (2015).	Earthquake (Turkey)	Cross-sectional	Individual	304 children aged 7-12 years	Disaster exposure, demographic characteristics			Within the 3 months post disaster	PTSS
Kujawa, A., Hajcak, G., Danzig, A. P., Black, S. R., Bromet, E. J., Carlson, G. A., ... & Klein, D. N. (2016).	Hurricane (USA)	Longitudinal	Individual	260 children aged 9-12 years	Late positive potential, electroencephalogram, hurricane-related stress, prehurricane internalizing and externalizing symptoms and child, gender			8 weeks post disaster 8 months post disaster	Children's internalizing and externalizing symptoms
Kumar, M., & Fonagy, P. (2012).	Earthquake (India)	Experimental (with control group)	Individual	Exposed children sample (n=48), riots sample (n= 37) control sample (n=42) 3 age groups: 8-9 years 10-11 years 12-13 years Above 14 years	Trauma groups				Attachment styles psychological adjustment

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Kumar, M., & Fonagy, P. (2013).	Earthquake (India)	Experimental (with control group)	Individual	299 children aged 8-15 years Three groups: highly exposed earthquake sites (n = 128) and riot sites (n = 171) Control sample of 351 no-trauma exposed	Type of disaster			3.4 years post disaster	Adjustment difficulties PTSD
Kuwabara, H., Araki, T., Yamasaki, S., Ando, S., Kano, Y., & Kasai, K. (2015).	Tsunami (Japan)	Cross-sectional	Individual	1102 children and 1157 adolescents	Age, gender, high impact group, lower-impact group (effect only for PTSS)			6 weeks post disaster	PTSS PTSD, depression
La Greca, A. M., Danzi, B. A., & Chan, S. F. (2017).	Hurricane (USA)	Cross-sectional	Individual	327 children aged 7-11 years	Gender, ethnicity, age, dsm-IV, dsm-V and ICD-11			8 months post disaster	PTSD, anxiety and depression
La Greca, A. M., Lai, B. S., Joormann, J.,	Hurricane (USA)	Cross-sectional	Individual and	116 children aged 8 years	Gender, age, race,			8 months post disaster	PTS and epression

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Auslander, B. B., & Short, M. A. (2013).			Interpersonal		disaster exposure, hurricane-related stressors, social support, genetic markers				
La Greca, A. M., Lai, B. S., Llabre, M. M., Silverman, W. K., Vernberg, E. M., & Prinstein, M. J. (2013).	Hurricane (USA)	Longitudinal	Individual and Interpersonal	568 children aged 9 years	Disaster exposure, stressors, gender, social support, coping, general anxiety			3 months post disaster (T1) 7 months post disaster (T2) 10 months post disaster (T3)	PTSS
La Greca, A. M., Silverman, W. K., & Wasserstein, S. B. (1998).	Hurricane (USA)	Longitudinal	Individual, Interpersonal and Intergroup	92 children of 4 th , 5 th and 6 th grades	Disaster exposure: life threat during the event, loss/disruption following the event	Efforts to Process and Cope with Events	Preexisting child characteristics, Ethnicity, Gender, Prior functioning, Anxiety, Inattention, Academic skill, Major life event, Social support	15 months Pre-disaster (T1), 3 months post disaster (T2), 7 months post disaster (T3)	PTS
La Greca, A. M., Silverman, W. K., Lai, B., &	Hurricane (USA)	Longitudinal	Individual and Interpersonal	384 children (T1)	Life threat, children's disaster exposure		Social support from peers (buffer)	9 months post disaster (T1)	PTSS

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Jaccard, J. (2010).				aged M=8.74 years 245 children (T2)				21 months post disaster (T2)	
La Greca, A. M., Silverman, W. K., Vernberg, E. M., & Prinstein, M. J. (1996).	Hurricane (USA)	Longitudinal	Individual	442 Children, 3 rd - 5 th grades	Disaster exposure, preexisting child characteristics (e.g., ethnicity), characteristics of the post disaster recovery, environment : major life stressors, social support	Coping		3 months post disaster (T1) 7 months post disaster (T2) 10 months post disaster (T3)	PTSS
Lack, C. W., Sullivan, M. A., (2008).	Tornado (USA)	Cross-sectional	Individual	102 children aged 8-12 years and 96 parents	Initial disaster exposure, attributions about the disaster, coping style			13 months post disaster	Long-term posttraumatic distress
Lai, B. S., Kelley M. L., Harrison, K. M., Thompson, J. E., & Brown, S-S. (2014).	Hurricane (USA)	Longitudinal	Individual and Interpersonal	353 mother-child dyads aged 8-15 years	Levels of disaster stressor agreement among mother-child dyads, social support from parents			3-7 months post disaster (T1) 14-17 months post disaster (T2)	PTS in children PTS in mothers

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

					or a classmate/friend				
					disaster related experiences, actual life threat				
Lai, B. S., Beaulieu, B., Ogokeh, C. E., Self- Brown, S., & Kelley, M. L. (2015).	Hurricane (USA)	Longitudinal	Individual and Interpersonal	353 mothers- children dyads aged 8-16 years	Trauma exposure			3-7 months post disaster (T1) 14-17 months post disaster (T2)	PTS symptoms
Lai, B. S., La Greca, A. M., & Llabre, M. M. (2014).	Hurricane (USA)	Cross- sectional	Individual	204 children aged 7-11 years	Impact of a natural disaster, disaster exposure, recovery stressors, gender	PTS symptoms activity		8 months post disaster	PTS symptoms Sedentary activity
Lai, B. S., La Greca, A. M., Auslander, B. A., & Short, M. B. (2013).	Hurricane (USA)	Longitudinal	Individual	277 children (between 8.70 and 9.40 years)	Disaster exposure, recovery stressors, time			8 months post disaster (T1) 15 months post disaster (T2)	PTSD and depression
Lai, B. S., Osborne, M. C., Piscitello, J., Self- Brown, S., & Kelley, M. L. (2018).	Hurricane (USA)	Longitudinal	Individual and Interpersonal	426 children aged 8-16 years	Social support, time			3-7 months (T1) 13-17 months (T2) 19-22 months (T3)	PTSS

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

								25-27 months (T4)	
Lai, B. S., Tiwari, A., Beaulieu, B. A., Self-Brown, S., & Kelley, M. L. (2015).	Hurricane (USA)	Longitudinal	Individual and Interpersonal	283 mother-child dyads aged 8-15 years	Mothers posttraumatic stress symptoms, disaster exposure, traumatic life events, social support, time 1			3-7 months post disaster (T1) 13-17 months post disaster (T2) 19-22 months post disaster (T3) 25 – 27 months post disaster	PTSS depression anxiety
Laor, N., Wolmer, L., Kora, M., Yucel, D., Spirman, S., & Yazgan, Y. (2002).	Earthquake (Turkey)	Cross-sectional	Individual	303 children aged 8 years	Disaster exposure, gender, age, past trauma experiences, predisaster functioning, grief, dissociation			4 months post disaster	PTSD
Laplante, D. P., Brunet, A., Schmitz, N., Ciampi, A., & King, S. (2008).	Ice Storm (Canada)	Cross-sectional	Individual and Interpersonal	89 mothers-child dyads aged M=5.5 years	Disaster exposure, maternal psychological functioning, maternal life event postpartum depression,			5 years post disaster	Intellectual and language performance of children

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

					time of utero exposure, demographic factors				
Laplante, D. P., Zelazo, P. R., Brunet, A., & King, S. (2007).	Ice Storm (Canada)	Cross-sectional	Individual and Interpersonal	52 children aged 2 years	Prenatal maternal stress, trimester of pregnancy, maternal and pregnancy factors, maternal anxiety and depression, parental socioeconomic status			2 years post disaster	Functional play
Lee, O. (1999).	Hurricane (USA)	Cross-sectional	Individual and Intergroup	1274 and 5 th grades	Ethnicity, socioeconomic status, gender			18 months post hurricane	Science knowledge, world views, information sources
Li, G., Wang, L., Cao, C., Fang, R., Cao, X., Chen, C., Elhai, J. D., & Hall, B. J. (2019)	Earthquake (China)	Cross-sectional	Individual, Intergroup	13,438 children 6-18 years old	Trauma exposure Quality of life Sex Age Ethnicity				PTSD Executive dysfunction symptoms
Li, X., Huang, X., Tan, H., Liu, A., Zhou, J., & Yang, T. (2010).	Flood (China)	Cross-sectional	Individual and Interpersonal	3698 families Children aged 7-15 years	PTSD in parents, flood exposure level of the children			18 months post disaster	Children PTSD

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

					age, gender, parental attitudes, class suspended				
Li, Y., Li, H., Decety, J., & Lee, K. (2013).	Earthquake (China)	Experimental (with control group) longitudinal	Individual	60 children pre-disaster group, 60 children 1 month post disaster 60 children 3 years post disaster aged 6 years	Disaster exposure		Age	1 month Post disaster (T1) 3 years later (T2)	Children's altruistic giving
Li, Y., Li, H., Decety, J., & Lee, K. (2013).	Earthquake (China)	Experimental (with control group)	Individual	65 children experimental condition 58 control condition 128 children from a no-disaster area aged 6-9 years	pictures of property damage and human suffering, area		Age empathy	3 years post disaster	Children's altruistic giving
Liang, Y., Cheng, J., Zhou, Y., & Liu, Z. (2019)	Earthquake (China)	Longitudinal	Individual	301 children, 9-14 years old	Trauma exposure Prequake trauma gender, age grade			4, 16, 29, 40 and 52 months after the disaster	PTSD
Liao, T. L., Chen, Y. S.,	Earthquake	Longitudinal	Individual and	12.111 adolescents	Gender,			2 years post disaster	Internalizing and

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Chen, C. Y., & Chien, L. Y. (2014).	(Taiwan)		Interpersonal	(high school)	urbanization level, primary caregiver's gender, education level and occupation level, impact of the earthquake, family member died or severely injured, length of time to restore the home, affected and unaffected groups			(T1) 4 years post disaster (T2)	Externalizing Behaviours
Liu, K., Liang, X., Guo, L., Li, Y., Li, X., Xin, B., ... & Li, Y. (2010).	Earthquake (China)	Cross-sectional	Individual	118 children and adolescent aged 5-18 years. 3 age groups: (2.7 years, 8-11 years and 12-15 years)	Socio-demographics, disaster related variables, disaster exposure, gender, age			Within 1 month post disaster	Acute stress disorder
Liu, M., Wang, L., Shi, Z., Zhang, Z., Zhang, K., & Shen, J.	Earthquake (China)	Longitudinal	Individual	330 students ranged from grade 3 rd to 5 th grade	Age, gender and grade, disaster exposure			6 months post disaster 12 months post disaster	Mental health problems Anxiety,

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

(2011).									depression and PTSD
Liu, X., Yang, H., Tang, B., Liu, Y., & Zhang, L. (2017).	Earthquake (China)	Cross-sectional	Individual, Interpersonal and Intergroup	591 children and adolescent aged 12-16 years	Gender, age, ethnicity, religious faith, chronic disease history, residential area, family resident population, main source of income for the family, disaster related experiences, psychological counselling and training			6 years post disaster	Physical and mental health status
Lochman, J. E., Vernberg, E., Powell, N. P., Boxmeyer, C. L., Jarrett, M., McDonald, K., ... & Kassing, F. (2016)	Tornado (USA)	Pre post (without control group) and longitudinal	Individual	360 children aged 9 -11 years and parents	Severity and duration of disaster exposure and loss, gender, parental depression, 3 cohort of coping power program		Pre-tornado, levels of anxiety	Pre disaster (T1) 6 months post disaster (T2) 12 months post disaster (T3)	Child psychological and behavioral adjustment Aggressive behavior Internalizing behavior
Lonigan, C. J., Shannon, M. P., Finch Jr, A. J.,	Hurricane (USA)	Cross-sectional	Individual	5687 children aged 9-19 years	Disaster exposure, gender, ethnicity			3 months post disaster	Anxiety and PTSD

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Daugherty, T. K., & Taylor, C. M. (1991).									
Lonigan, C. J., Shannon, M. P., Taylor, C. M., Finch Jr, A. J., & Sallee, F. R. (1994).	Hurricane (USA)	Cross-sectional	Individual	5687 children 3 age groups: preadolescents aged 9-12 years early adolescents aged 13-15 years and late adolescents aged 16 years or older	Disaster exposure, anxiety, age, sex, race				PTSD
Lowe, S. R., Godoy, L., Rhodes, J. E., & Carter, A. S. (2013).	Hurricane (USA)	Pre-post and Longitudinal	Individual and Interpersonal	184 mothers and 251 children aged 5-10	Age, sex, disaster exposures and related experiences, stressor	Maternal psychological distress School mobility		12 months pre disaster (T1) 12 months post disaster (T2) 3 years post disaster (T3)	Child symptoms (internalizing, externalizing)
Ma, X., Liu, X., Hu, X., Qiu, C., Wang, Y., Huang, Y., ... & Li, T. (2011).	Earthquake (China)	Cross-sectional	Individual and Interpersonal	3645 adolescents aged 12-18 years	Demographic data, disaster exposure, cognitive status, social supports			6 months post disaster	PTSD Post-trauma stress symptoms

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Madkour, A. S., Johnson, C. C., Clum, G. A., & Brown, L. (2011).	Hurricane (USA)	Pre-post and Longitudinal	Individual and Intergroup	5267 adolescents aged 12-18 years	Time, age, gender, race/ethnicity			2 years pre disaster (T1) 4 months pre disaster (T2) 2 years Post disaster (T3)	Violence-related behaviors
Martin, N. C., Felton, J. W., & Cole, D. A. (2016).	Flood (USA)	Pre-post (without control group)	Individual and Interpersonal	239 adolescents aged 10-15 years	Disaster exposure, predisaster levels of negative life events, depressive symptoms, rumination and negative friendship interactions			Pre disaster (T1) 10 days post disaster (T2)	PTSS
Mashiko, H., Yabe, H., Maeda, M., Itagaki, S., Kunii, Y., Shiga, T., ... & Niwa, S. I. (2017).	Earthquake (Japan)	Cross-Sectional	Individual	15,274 children aged 4-15 years	Age, gender, evacuation zones			10 months post disaster	Mental health status
McDermott, B. M., & Cobham, V. E. (2012).	Cyclone (Australia)	Cross-Sectional	Individual and Interpersonal	145 families children aged 8-12 years	Post-disaster family functioning,			3 months post disaster	Family functioning PTSD

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

					disaster-related variables threat to self, family health and/or dysfunction, age, gender				
McDermott, B. M., Cobham, V. E., Berry, H., & Stallman, H. M. (2010).	Cyclone (Australia)	Cross-Sectional	Individual and Interpersonal	568 children aged 8-15 years	Family resilience, event-related factors, previous child mental illness, social connectedness, disaster exposure, age, grade			3 months post disaster	PTSD
McDermott, B., Berry, H., & Cobham, V. (2012).	Cyclone (Australia)	Cross-Sectional	Individual and Interpersonal	804 children aged 8-13 years	Age, gender, school system, trauma exposure, threat perception, new social connectedness			3 months post disaster	PTSD
McDermott, B., Cobham, V., Berry, H., & Kim, B. (2014).	Cyclone (Australia)	Longitudinal	Individual and Interpersonal	71 children And 191 adolescents grades 5 th -10 th	Disaster exposure, social connectedness, PTSD, age, time			3 months post disaster 18 months Post disaster	PTSD

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

McDonald KL, Vernberg EM, Lochman JE, et al. (2019)	Tornado (USA)	Longitudinal	Individual Interpersonal	346 4th-6th-graders and their caregivers	Predisaster individual and family characteristics Disaster exposure		Positive parenting and pretornado caregiver trauma exposure	4 years after tornado.	PTSS
McFarlane, A.C. (1987)	Bushfires (South Australia)	Longitudinal	Individual and Interpersonal	150 children (T1-T2) 101 children (T3) and parents (T2-T3) aged 6-13 years	Disaster exposure		Family functions: - irritable distress - involvement Overprotection	2 months post disaster 8 months post disaster (T2) 26 months post disaster (T3)	Emotional and behavioural problems Children disorders
McLaughlin, K. A., Fairbank, J. A., Gruber, M. J., Jones, R. T., Osofsky, J. D., Pfefferbaum, B., ... & Kessler, R. C. (2010).	Hurricane (USA)	Longitudinal	Individual	576 children and adolescents aged 4-17 years	Stressors experienced in the hurricane, ongoing stressors			5-7 months post disaster (T1) 7 to 10 months post disaster (T2) 15-19 months post disaster (T3)	Emotional functioning in children Emotional disturbance
McLaughlin, K. A., Fairbank, J. A., Gruber, M. J., Jones, R. T., Lakoma, M. D., Pfefferbaum, B., ... & Kessler, R. C. (2009).	Hurricane (USA)	Cross-Sectional	Individual and Interpersonal	797 children aged 4-17 years	Hurricane-related stressors, demographics, family factors			18-27 months post disaster	Emotional disturbance

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

McLean, M. A., Cobham, V. E., Simcock, G., Elgebeili, G., Kildea, S., & King, S. (2018)	Flood (USA)	Cross-sectional	Individual Interpersonal	230 mothers and 118 children 4 years old	prenatal maternal stress maternal socioeconomic status, education, income, and marital status. Major life events. Infant birth weight and gestational age		Timing of flood exposure during pregnancy and child sex	12 months postflood	Children Anxiety
Meyer, A., Danielson, C. K., Danzig, A. P., Bhatia, V., Black, S. R., Bromet, E., ... & Klein, D. N. (2017).	Hurricane (USA)	Pre-post and Longitudinal	Individual	223 children, aged between 3.00-4.09 years and their mothers	Age, temperamental fear, biomarker of risk for anxiety, fearfulness, hurricane stressors, error (error-related negativity)			3 years of age, 6 years of age, and 9 years of age (pre disaster assessment) 6 weeks post disaster	Internalizing symptoms
Mikolajewski, A. J., & Scheeringa, M. S. (2018)	Hurricane (USA)	Cross-sectional	Individual	36 children 3–6 years old	Age Respiratory Sinus Arrhythmia			19 to 681 days before disaster 8 months to 3 years after disaster	PTSD
Mikyung, J., Se-hwa, L. & Lee-jin, K. (2020)	Earthquake (Nepal)	Cross-sectional	Individual Intepersonal	200 pairs parents and children 6–17 years old	PTSD and internalizing and externalizing problems in parents			24 months after earthquake	PTSD internalizing and externalizing problems in children

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

					Education Occupation				
Miller, P. A., Roberts, N. A., Zamora, A. D., Weber, D. J., Burleson, M. H., Robles, E., & Tinsley, B. J. (2012).	Wildfire And Tornado (USA)	Cross-Sectional	Individual and Interpersonal	24 parents and 44 children aged 5-17 years 32 parents and 63 children aged from 6 weeks to 18 years	Coping activities, prior and current disaster exposure levels, family coping, social support			Within 4 days of each disaster	Psychological impact of disasters on children
Milne, G. (1977).	Cyclone (Australia)	Cross-Sectional	Individual	649 children aged 5-16 years	Evacuated or not, age, gender				School problem Fearful, regressive, and aggressive behaviour Injuries, diseases and infections Emotional and physical disorders
Moore, K. W., & Varela, R. E. (2010).	Hurricane (USA)	Cross-Sectional	Individual and Interpersonal	156 children aged 9-14 years	Gender, disaster exposure, parent support,			33 months post disaster	PTSS

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

					classmate support, teacher support friend support immediate loss disruption continued loss and disruption negative events				
Mordeno, I. G., Galela, D. S., Nalipay, M. J. N., & Cue, M. P. (2018)	Typhoon (Philippine)	Cross-sectional	Individual	225 children 9-17 years old	Centrality of Event	Sensory-based trauma memory quality			Acute Stress Disorder Depression
Moss, K. M., Simcock, G., Cobham, V., Kildea, S., Elgbeili, G., Laplante, D. P., & King, S. (2017).	Flood (Australia)	Longitudinal	Individual and Interpersonal	145 mothers	Prenatal maternal stress, maternal severity of flood exposure subjective stress reactions cognitive appraisal		Timing of exposure	12 months post disaster 16 months postpartum	Child cognitive and motor development
Mouchenik, Y., Marty-Chevreuril, A., Marquer, C., Joseph, N. E., Ducasse, J. W., Ryswick,	Earthquake (Haiti)	Cross-Sectional	Individual	166 children aged 3-6 years	Demographic aspects, gender, age, trauma exposure			11 months post disaster	Psychological disturbance

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

C., ... & Baubet, T. (2014).									
Mumper, E. E., Dyson, M. W., Finsaas, M. C., Olino, T. M., & Klein, D. N. (2019)	Hurricane (USA)	Longitudinal	Individual	392 children 3 years-old	Sex Age behavioral inhibition		Life stress events and natural disaster exposure	7 year before hurricane, six weeks after hurricane and 2 years after the hurricane	Anxiety
Muris, P., Meesters, C., Merckelbach, H., Verschuren, M., Geebelen, E., & Aleva, E. (2002).	Hurricane (Antilles)	Experimental (with control group)	Individual	161 Antillean children disaster exposure 185 Belgian control group aged 8-11 years	Age, gender, different forms of fear related and not related to disasters				Fear of storms
Najarian, L. M., Goenjian, A. K., Pelcovtztz, D., Mandel, F., & Najarian, B. (1996).	Earthquake (Armenia)	Cross-Sectional	Individual	74 children aged 11-13 years	Trauma exposure, relocation			2.5 years post disaster	PTSD, Depression , behavioral difficulties
Navarro, J., Pulido, R., Berger, C., Arteaga, M., Osofsky, H. J., Martinez, M., ... & Hansel, T. C. (2016).	Earthquake Tsunami Hurricane (USA)	Cross-Sectional	Individual	827 children and adolescents aged 8-17 years	Type of disaster			4 months post disaster	Depression PTS

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Neuner, F., Schauer, E., Catani, C., Ruf, M., & Elbert, T. (2006).	Tsunami (Sri Lanka)	Cross-Sectional	Individual	264 children, aged 8-14 years	Objective and subjective disaster exposure, previous traumatic exposure			4 weeks post disaster	PTSD
Nomura, Y., Davey, K., Pehme, P. M., Finik, J., Glover, V., Zhang, W., ... Ham, J. (2019)	Storm (USA)	Cross-sectional	Individual Interpersonal	310 pairs mother-child 6 months old	Maternal depression Maternal education, marital status, race, smoking, and child's sex Disaster exposure		In utero level of exposure	Immediately after the disaster and after 6 months	Infant temperament (emotion dysregulation and distress)
Nygaard, E., Jensen, T. K., & Dyb, G. (2010).	Tsunami (Southeast Asia)	Cross-Sectional	Individual and Interpersonal	38 norwegian sibling pairs and 38 nonsibling pair aged 6-17 years	sibling vs nonsibling, gender, children exposure			6 months post disaster	PTSD
Nygaard, E., Jensen, T. K., & Dyb, G. (2012).	Tsunami (Southeast Asia)	Longitudinal	Individual	133 children norwegian and adolescents aged 6-17 years	Disaster exposure, distress and posttraumatic stress reactions, general mental health problems			10 months post disaster 2.5 years post disaster	Posttraumatic stress reactions

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Ortiz, C. D., Silverman, W. K., Jaccard, J., & La Greca, A. M. (2011).	Hurricane (USA)	Experimental (with control group)	Individual and Interpersonal	248 children from a hurricane prone region 63 control group (neutral film) 185 exposure to disaster media aged 7-12 years	Life event, anxiety depression social support and use of coping strategies		Grade Sex		State anxiety
Osofsky, H. J., Osofsky, J. D., Kronenberg, M., Brennan, A., & Hansel, T. C. (2009).	Hurricane (USA)	Cross-sectional	Individual	7258 children aged 7-19	Disaster exposure, demographic variables			2 years post disaster	PTSS
Osofsky, J. D., Osofsky, H. J., Weems, C. F., Hansel, T. C., & King, L. S. (2014).	Gulf Oil Spill and Hurricane (USA)	Pre - post (without control group)	Individual	1730 children and adolescents aged 3-18 years	Level of oil spill stress, preexisting PTSD symptoms, previous hurricane exposure, gender minority status			1 year Pre-disaster 1 year post disaster	PTSD
Osofsky, J.D., Kronenberg, M., Bocknek, E., & Hansel, T. C. (2015).	Hurricane (USA)	Longitudinal	Individual and Interpersonal	914 children aged 3-5 years	Attachment, caregiver disruption, nonhuman losses, disaster exposure			During the first year post disaster (T1) After 1 year (T2)	Children's long-term post-hurricane psychological outcome

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

								After 2 years (T3) After 3 years (T4)	
Pina, A. A., Villalta, I. K., Ortiz, C. D., Gottschall, A. C., Costa, N. M., & Weems, C. F. (2008).	Hurricane (USA)	Pre-post (without control group)	Individual	46 youth (M= 11.43)	Disaster exposure, social support, discrimination and coping			Pre-disaster 6-7 months post disaster	PTSD, anxiety, and depression
Piotrowski, C., & Dunham, F. Y. (1983).	Hurricane (USA)	Experimental (withour control group)	Individual	269 Children 5 th grade from city hit by the hurricane 194 in the city not hit	Disaster exposure		Locus of control	5-8 months post disaster	Perception of the hurricane concept "hurricane"
Ponnamperuma, T., & Nicolson, N. A. (2016).	Tsunami (Sri Lanka)	Cross-Sectional	Individual and Interpersonal	414 adolescent aged 12-16 years	Negative appraisals, lifetime traumatic events, ongoing adversity, social support			3 years after the tsunami	PTSS, internalizing Symptoms Negative appraisal score
Prinstein, M. J., La Greca, A. M., Vernberg, E. M., & Silverman, W. K. (1996).	Hurricane (USA)	Cross-Sectional	Individual and Interpersonal	506 children in the 3 rd , 4 th and 5 th grades of elementary schools	Children's social support, coping emotional processing and distraction, coping			7 months after hurricane Andrew	PTSD

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Proctor, L. J., Fauchier, A., Oliver, P. H., Ramos, M. C., Rios, M. A., & Margolin, G. (2007).	Earthquake (USA)	Pre-post (without control group)	Individual and Interpersonal	117 two-parent exposed families Children aged 4-5 years	Predisaster parenting behaviors and postdisaster, parental stress, earthquake impact	Post parental stress	Pre-earthquake parental behaviors	8 months after the earthquake	Parental stress and children's distress
Pullins, L. G., McCammon, S. L., Lamson, A. S., Wuensch, K. L., & Mega, L. (2005).	Hurricane and Flood (USA)	Cross-Sectional	Individual	612 children aged 5-19 years 248 children and 86 parents participated in the evaluation phase	Grade, severity of exposure, race, gender				Adjustment problems in children
Pynoos, R. S., Goenjian, A., Tashjian, M., Karakashian, M., Manjikian, R., Manoukian, G., ... & Fairbanks, L. A. (1993).	Earthquake (Armenia)	Cross-Sectional	Individual	231 children aged 8-16 years	Gender, proximity to the epicentre, severity of posttraumatic stress reaction			18 months post disaster	PTSD
Raccanello, D., Burro, R., & Hall, R. (2017).	Earthquake (Italy)	Experimental (with control Group)	Individual	127 children aged 7-10 years	Group (experimental, control), class level (2 nd to 5 th graders), gender			2 years post disaster	Children's emotional competence: Understanding, regulating and

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

									expressing emotions Knowledge of earthquakes
Roberts, Y. H., Mitchell, M. J., Witman, M., & Taffaro, C. (2010).	Hurricane (USA)	Pre-post (without control group) and longitudinal	Individual	43 children and adolescent aged 11-18 years	Disaster-related variables, demographic information			Before the disaster 1 year post disaster 2 years postdisaster	Depressive, Anxious PTSS
Roussos, A., Goenjian, A. K., Steinberg, A. M., Sotiropoulou, C., Kakaki, M., Kabakos, C., ... & Manouras, V. (2005).	Earthquake (Greece)	Cross-Sectional	Individual	1937 children and adolescent aged 9–18 years, of two differentially exposed cities (Ano Liosia, at the epicenter, and Dafni, 10 kilometers from the epicenter)	Objective and subjective features of earthquake exposure, gender, school level, postearthquake difficulties, death of a family member, thoughts of revenge			3 months post disaster	Posttraumatic stress and depressive reactions
Roysircar, G., Colvin, K. F., Afolayan, A. G., Thompson, A., & Robertson, T. W. (2017).	Earthquake (Haiti)	Cross-sectional	Individual	131 children and adolescent aged 6-15 years	Age, gender, year, location				Resilience and vulnerability

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Russell, J. D., Neill, E. L., Carrión, V. G., & Weems, C. F. (2017).	Hurricane (USA)	Cross-sectional	Individual	786 children aged 8-13 years and adolescent 14-18 years	Severity symptoms, symptom indices			36 months post disaster	Network structure of PTSD
Russoniello, C. V., Skalko, T. K., O'Brien, K., McGhee, S. A., Bingham-Alexander, D., & Beatley, J. (2002).	Hurricane and Flood (USA)	Cross-Sectional	Individual, Interpersonal and Intergroup	218 children aged 9-12 years	Experiencing flooding at home, gender, coping, social support, race			6 months post disaster	PTSD symptom
Şahin, N. H., Batıgün, A. D., & Yılmaz, B. (2007).	Earthquake (Turkey)	Longitudinal	Individual and Interpersonal	Study 1: 420 children aged 6-11 years Study 2: 948 adolescents aged 12-16 years	Gender, location, impact of the disaster, separation from family, losses, injuries, disaster exposure, school performance, reasons for living, future expectation			5 months post second earthquake (T1) 3 months after the first data Collection (T2)	PTSS Psychological symptoms
Sales, J. M., Fivush, R., Parker, J., & Bahrick, L. (2005).	Hurricane (USA)	Longitudinal	Individual	35 children aged 3-4 years	Low, moderate, and high-stress groups			Immediately post disaster (T1) 6 years later (T2)	Recall and PTSD
Salloum, A., & Lewis, M. L. (2010).	Hurricane (USA)	Cross-sectional	Individual and	42 African American children	Disaster exposure,			5-8 months post disaster	Children's coping strategy

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

			Interpersonal	aged 7-12 years and 38 parents	parent's coping strategy				
Salloum, A., Carter, P., Burch, B., Garfinkel, A., & Overstreet, S. (2011).	Hurricane and Exposure to Community Violence (USA)	Cross-Sectional	Individual and Interpersonal	122 children aged 7-12 years	Disaster exposure		Prior experiences with hurricane Katrina Exposure to community violence		PTSS and depression
Saylor, C. F., Swenson, C. C., Stokes Reynolds, S., & Taylor, M. (1999).	Hurricane (USA)	Cross-Sectional	Individual	475 children aged 2-10 years	Disaster exposure, different type of trauma, age, gender			14 months post disaster	PTSD Emotional distress
Scaramella, L. V., Sohr-Preston, S. L., Callahan, K. L., & Mirabile, S. P. (2008).	Hurricane (USA)	Pre-post and longitudinal	Individual and Interpersonal	2 groups of low-income mothers and their children aged 2 years pre-disaster: n=55 post-disaster: n=47		Mother's depression Parenting efficacy Perceived financial strain, Neighborhood violence Number of adults in the home		1 to 2 years pre disaster (T1) 6 months post disaster (T2) 18 months post disaster (T3)	Child problem behaviour

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Scheeringa, M. S. (2014).	Oil Spill and Hurricane Katrina (USA)	Cross-Sectional	Individual	284 children aged 3-6 years	Type of disaster: oil spill, disaster exposure repeated traumas (cumulative number of events)				PTSD
Scheeringa, M. S., & Zeanah, C. H. (2008).	Hurricane (USA)	Cross-Sectional	Individual and Interpersonal	70 preschool children ages 3-6 and their caregiver	Disaster exposure and experiences, groups (stayed/evacuated, separated/not separated, black/non-black and boy/girl)				PTSD Comorbid Disorders
Schwind, J. S., Formby, C. B., Santangelo, S. L., Norman, S. A., Brown, R., Hoffman Frances, R., ... Karmacharya, D. (2018)	Earthquake (Nepal)	Cross-sectional	Individual Interpersonal Intergroup	62 children 8-17 years old and parents	Earthquake exposures age gender marital status household identified religion household identified ethnic group level of education occupation			1 year after disaster	Depression , PTSD Resilience

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

					number of members in household				
Self-Brown, S., Lai, B. S., Harbin, S., & Kelley, M. L. (2014).	Hurricane (USA)	Longitudinal	Individual and Interpersonal	423 mother-child dyads Children aged 8-16 years	Maternal posttraumatic stress disorder symptom trajectories			3-7 months post disaster (T1) 13-17 months post disaster (T2) 19-22 months post disaster (T3) 25-27 months post disaster (T4)	PTSS
Shannon, M. P., Lonigan, C. J., Finch Jr, A. J., & Taylor, C. M. (1994).	Hurricane (USA)	Cross-sectional	Individual and Intergroup	5687 school-aged children aged 9-13 years	Disaster exposure, race, gender, age			3 months post disaster	PTSD School performance
Shaw, J. A., Applegate, B., & Schorr, C. (1996).	Hurricane (USA)	Longitudinal	Individual	30 school children aged 7-13 years	Disaster exposure, gender			2 months post disaster (T1) 8 months post disaster (T2) 21 months post disaster (T3)	PTSS and psychological morbidity
Shaw, J. A., Applegate, B., Tanner, S., Perez, D., Rothe, E.,	Hurricane (USA)	Longitudinal	Individual	106 school children aged 6-11 years	High and low impact groups			8 weeks post disaster (T1) 32 weeks	PTSS

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Campo-Bowen, A. E., & Lahey, B. L. (1995).								post disaster (T2)	
Silwal, S., Dybdahl, R., Chudal, R., Sourander, A., & Lien, L. (2018).	Earthquake (Nepal)	Cross-Sectional	Individual	893 students aged 11-17 years	Age, gender, ethnicity, parent's education and prior exposure to trauma, disaster exposure and experience		Gender	12 months post disaster	PTSS and depressive symptoms
Simcock, G., Cobham, V. E., Laplante, D. P., Elgbeili, G., Gruber, R., Kildea, S., & King, S. (2019)	Flood (USA)	Longitudinal	Individual Interpersonal	86 mother and children, 3-4 years old	Prenatal maternal stress Maternal marital status, socioeconomic status and education level Maternal cognitive appraisal			12 months post-flood 30 months and 48 month after flood	sleep, attention anxious/depressed symptoms
Simcock, G., Elgbeili, G., Laplante, D. P., Kildea, S., Cobham, V., Stapleton, H., ... King, S. (2017)	Flood (Queensland)	Cross-sectional	Individual Intepersonal	126 mother and children 6 months old	Prenatal Maternal Stress Mather exposure, subjective stress, Cognitive appraisal, school level,		infant sex, timing of the flood in gestation, and mother's emotional response to the disaster.	3–10 months after flood	Infant temperament

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

					socioeconomic status, anxiety, depression, gestational age at birth Infant sex				
Simcock, G., Laplante, D. P., Elgbeili, G., Kildea, S., & King, S. (2018)	Flood (USA)	Longitudinal	Individual Interpersonal	206 mothers and children aged: 2 Months 6 Months 16 Months 2½ Years 4 Years	Mothers' objective exposure Mothers' post-traumatic subjective stress Mothers' peritraumatic distress Mothers' Cognitive appraisal Age of gestation exposure to the flood. Maternal depression and anxiety Maternal socioeconomic status Maternal education level. Child gestational age, birth weight, and head			2 Months 6 Months 16 Months 2½ Years 4 Years after flood	Child motor development

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

					circumference				
Siqueland, J., Hafstad, G. S., & Tedeschi, R. G. (2012).	Tsunami (Southeast Asia)	Longitudinal	Individual and Interpersonal	68 parents and their 105 norwegian children	Parent's disaster exposure, child-disaster exposure			6 months post disaster (T1) 10 months post disaster (T2) 30 months post disaster (T3)	PTG in parents PTSS in parents and children
Siswa Widyatmoko, C., Tan, E. T., Conor Seyle, D., Haksi Mayawati, E., & Cohen Silver, R. (2011).	Earthquake (Indonesia)	Cross-sectional	Individual	3115 children aged 6-14 years and teachers	Children symptoms identified from teachers,			2 years post disaster	PTSS
Soysa, C. K. (2013).	Tsunami War (Sri Lanka)	Longitudinal		War sample: 60 youths aged 9-16 years olds Tsunami sample: 60 adolescent aged 12-14 years	Trauma exposure (war or tsunami)			3 months post a major war-related event 3 months post tsunami	PTSD
Spell, A. W., Kelley, M. L., Wang, J.,	Hurricane (USA)	Cross-sectional	Individual and	260 children aged 8-16 years and	Child disaster exposure		Global maternal psychological	3-7 months post disaster	Children's Psychological

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Self-Brown, S., Davidson, K. L., Pellegrin, A., ... & Baumeister, A. (2008).			Interpersonal	their mothers			High distress and maternal posttraumatic stress disorder		distress: child internalizing and externalizing symptoms
Sprung, M. (2008).	Hurricane (USA)	Cross-sectional	Individual	183 children aged 5-8 years: 145 from the hurricane Katrina disaster area, 95 from Coastal Mississippi, and 50 children were from Hattiesburg, Mississippi. 38 children composing the control group from Boston area.	Gender, age, ethnicity, socioeconomic resources, higher or low levels of understanding of the mind			7 months post disaster	Intrusive thoughts and level of cognitive functioning
Sprung, M., & Harris, P. L. (2010).	Hurricane (USA)	Cross-Sectional	Individual	165 children aged 5-9 years	Level of exposure: proximity to the hurricane and the loss-disruption			7 months post disaster	Intrusive thoughts Attention Knowledge about thinking: i.e.,

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

									theory-of-mind or meta-cognitive competencies General language abilities
Striskandarajah, V., Neuner, F., & Catani, C. (2015).	Tsunami (Sri Lanka)	Cross-Sectional	Individual and Interpersonal	359 children aged 7-11 years	Age, gender, socioeconomic status, disaster exposure, type of disaster, family functions		Parental care	7 years post disaster	Internalizing behavior problems Externalizing behavior problems
Stoppelbein, L., & Greening, L. (2000).	Tornado (n.d.)	Experimental (with control group)	Individual	226 children and adolescents aged 7-17 years: - 39 bereaved group - 118 disaster group - 69 non-trauma control group	Age, gender, type of stressors: (bereaved, disaster), daily stressors, parent PTSD			Tornado group 1 year post disaster bereaved group an average of 3 years post their loss	PTSD Emotional adjustment Depression
Strahm, A. M., Bagne, A. G., Rued, H.	Flood (USA)	Cross-sectional	Individual Intepersonal	56 pairs mother-child 9 years old	cortisol concentration in mothers		Flood distance	3 months and 9 years after Flood	cortisol concentrati

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

A., Larson, K. J., Roemmich, J. N., & Hilmert, C. J. (2020)					Socioeconomic status maternal age, child sex				on in children
Sullivan, M. A., Saylor, C. F., & Foster, K. Y. (1991).	Hurricane (USA)	Pre-post (without control group)	Individual and Interpersonal	238 families 278 children aged 1,11-6,3 years	Pre-post hurricane behavioural problems			6-8 weeks post disaster	Post-hurricane adjustment of pre-schoolers
Sun, X. Y., Fan, H. M., Bai, B., Song, H. T., Tao, F. Y., Song, Z. X., ... & Zhang, L. Y. (2014).	Earthquake (China)	Cross-Sectional	Individual	1828 children aged 6-16 years	Affected vs. non-affected group, age, gender			2 weeks post disaster	Psychosomatic symptoms
Sun, Y., & Yan, T. (2020)	Earthquake Tsunami (Japan)	Cross-sectional	Individual Interpersonal Intergroup	498 parents 35 children	City of residence Age Marital status Household composition Gender Education Economic status Impact of event Peer support			4 years post disaster	mental health
Swenson, C. C., Saylor, C. F., Powell, M. P., Stokes, S. J., Foster, K.	Hurricane (USA)	Experimental (with Control Group)	Individual and Interpersonal	161 children aged 2-6 years hurricane group	Exposure vs no exposure mothers' distress			14 months post disaster	Emotional and behavioral problems

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Y., & Belter, R. W. (1996).				170 children aged 2-10 years no-trauma group with classroom behavior problems					Anxiety and withdrawal
Takada, S. (2013).	Earthquake (Japan)	Cross-Sectional	Individual	8000 families with pre-school children and 466 families with disabled children Aged 4-6 years	Disaster exposure, house damage, disabilities			12 months post disaster	PTSD
Tang, W., Lu, Y., & Xu, J. (2018)	Earthquake (China)	Cross-sectional	Individual	6132 children 9-18 years old	Sleeping problems Negative life events Earthquake exposure Age Gender			3 years after earthquake	PTSD Depression Anxiety
Tang, W., Xu, D., Li, B., Lu, Y., & Xu, J. (2018)	Earthquake (China)	Cross-sectional	Individual	5.563 children, 9-20 years old	Earthquake exposure Age Gender	depression sleep anxiety PTSD			Suicidal ideation
Tang, W., Zhao, J., Lu, Y., Yan, T., Wang, L., Zhang, J., & Xu, J. (2017).	Earthquake (China)	Longitudinal	Individual, Interpersonal and Intergroup	435 children age M = 13,7 years	Age, gender, ethnic group, school grade, disaster exposure,			12 months post disaster 30 months post disaster	PTSD Depression Anxiety

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

					socioeconomic characteristics				
Tang, W., Zhao, J., Lu, Y., Zha, Y., Liu, H., Sun, Y., ... & Xu, J. (2018).	Earthquake (China)	Cross-Sectional	Individual	5505 children and adolescent 10-18 years	Child abuse and neglect, disaster exposure, gender, age, type of earthquake exposure	PTSD and depression		3 years post disaster	Suicidal behaviors
Tang, W., Zhao, J., Lu, Y., Zha, Y., Liu, H., Sun, Y., ... Xu, J. (2018)	Earthquake (China)	Cross-sectional	Individual	6.132 children 10–18 years old	level of earthquake exposure, physical and emotional abuse and neglect age, gender		PTSD and depression	3 years after the earthquake.	suicide risk
Tao, T., Duan, X., & Shi, J. (2014).	Earthquake (China)	Cross-Sectional	Individual	311 children and adolescents aged 10-17 years.	Mental health, age, gender			11 months post disaster	Posttraumatic stress symptoms
Tatsuta, N., Nakai, K., Satoh, H., & Murata, K. (2015).	Earthquake (Japan)	Pre-post (without control group)	Individual and Interpersonal	412 mother-child dyads	Two groups: pre-post disaster, electrocardiography, age, birth, weight, child gender,			6 months post disaster	Child's intelligence quotient Behavioral problems

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

					maternal age at parturition, birth order delivery type, drinking and smoking habits during pregnancy maternal and paternal education, levels and annual family income, cord blood and maternal blood, home environment				
Tees, M. T., Harville, E. W., Xiong, X., Buekens, P., Pridjian, G., & Elkind-Hirsch, K. (2010).	Hurricane (USA)	Longitudinal	Individual and Interpersonal	288 mothers	Disaster exposure, maternal mental health: - PTSD - depression post-partum - hostility			During the disaster 2 months post disaster 12 months postpartum	Early infant temperament Activity, adaptability, approach, intensity, and mood scales
Terranova, A. M., Boxer, P., & Morris, A. S. (2009).	Hurricane (USA)	Longitudinal	Individual	152 children (23 participants missing at T2)	Disaster exposure, gender and ethnicity peer	Regulatory abilities: (effortful control)		1.5 months post disaster (T1) 8 months post disaster	PTSD (T1-T2)

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

				Mean age= 11.52	victimization, prosocial behaviour, fear reactivity, effortful control, negative coping, PTSD (t1)		Negative coping	(T2)	
Terranova, A. M., Morris, A. S., Myers, S., Kithakye, M., & Morris, M. D. (2015).	Hurricane (USA)	Pre-post (without experimental group)	Individual and Interpersonal	118 children 47 aged from 4 years (pre and post) 71 aged from 4-6 years (post)	Family functioning: (parental separation) child characteristics, disaster exposure	Parental depression Parental functioning Parental hostility		Pre disaster 5 months post disaster	Internalizing symptoms, aggressive behaviors and fewer prosocial behaviors in children
Thienkrua, W., Cardozo, B. L., Chakkraband, M. S., Guadamuz, T. E., Pengjuntr, W., Tantipiwatana skul, P., ... & Tappero, J. W. (2006).	Tsunami (Thailand)	Longitudinal	Individual	371 children aged 7-14 years	Living in camps displaced, disaster exposure, age			2 months post disaster 9 months post disaster	PTSD depression
Thomson, J., Seers, K., Frampton, C., Hider, P., & Moor, S. (2016).	Earthquake (New Zealand)	Longitudinal	Individual	12014 children aged 4-5 years post-disaster	Time, gender, socio-economic status, exposure			Pre disaster, september 2010 (T1)	Behavioural and emotional problems

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

				Parents Teachers				Between september 2010 and february 2011 (T2) february-december 2011 (T3)	
Tian W, Jia Z, Duan G, Liu W, Pan X, Guo Q, Chen R, Zhang X. (2013).	Earthquake (China)	Longitudinal	Individual	596 children and adolescent aged 8-16 years	Socio-demographics, disaster exposure and experience, mental health status			15 months post disaster 36 months post disaster	Health-related quality of life
Uemoto, M., Asakawa, A., Takamiya, S., Asakawa, K., & Inui, A. (2012).	Earthquake (Japan)	Longitudinal	Individual	8800 school children exposed and control subjects were 1886 control group 3 rd , 5 th , or 8 th grade	Disaster exposure, grade, gender, time			3 and 6 months post disaster (T1-T2) 1 and 2 years Post disaster (T3-T4)	PTSD
Usami, M., Iwadare, Y., Kodaira, M., Watanabe, K., Aoki, M., Katsumi, C., ... & Tanaka, H. (2012).	Earthquake and Tsunami (Japan)	Cross-sectional	Individual	12524 children in kindergartens, elementary schools and junior high schools in	Disaster exposure, bereavements, experience and life in evacuation centers, gender			8 months post disaster	PTSS

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Usami, M., Iwadare, Y., Ushijima, H., Inazaki, K., Tanaka, T., Kodaira, M., ... Saito, K. (2019)	Earthquake (Japan)	Cross-sectional	Individual	262 children, 1-4 years old	Gender, age, damage to environmental conditions (house damage, evacuation conditions, and bereavement experience)			8, 20, 30, and 42 months after earthquake	PTSS
Usami, M., Iwadare, Y., Watanabe, K., Kodaira, M., Ushijima, H., Tanaka, T., ... & Saito, K. (2014).	Earthquake and Tsunami (Japan)	Longitudinal	Individual	11639 children aged 10 years	Time from disaster			8 months post disaster (T1) 20 months post disaster 30 months post disaster	PTSS PTSD Depression
Valenti, M., Ciprietti, T., Di Egidio, C., Gabrielli, M., Masedu, F., Tomassini, A. R., & Sorge, G. (2012).	Earthquake (Italy)	Pre-post and Longitudinal	Individual	18 participants with ASD exposed 42 participants with ASD no exposed	Exposed and non-exposed participants, age, exposure effect, time effect			A few days before the disaster 6 months post disaster 12 months post disaster	Adaptive behaviour of participants with ASD
Vernberg, E. M., La Greca, A. M., Silverman, W. K., & Prinstein, M. J. (1996).	Hurricane (USA)	Cross-Sectional	Individual and Interpersonal	568 Elementary, 3 rd , 4 th and 5 th grade	Exposure to traumatic events, child characteristics, access to social support, children's coping			3 months post disaster	PTSD

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Vezzali, L., Cadamuro, A., Versari, A., Giovannini, D., & Trifiletti, E. (2015).	Earthquake (Italy)	Cross-Sectional	Individual and Intergroup	517 children aged 7-12 years	Perceived disaster threat exposure	Two-groups representation One-group representation Positive outgroup attitudes	Participant's group of belonging	6 months post disaster	Contact behavioural intentions Helping behavioural intentions
Vezzali, L., Drury, J., Versari, A., & Cadamuro, A. (2016).	Earthquake (Italy)	Cross-Sectional	Individual and Interpersonal and Group	517 children aged 7-12 years	PTSS	Inclusion Of The Other In The Self One-Group Representation		6 months post disaster	Contact intentions Helping intentions
Vigil, J.M., Geary, D.C., Granger, D.A., Flinn, M.V. (2010).	Hurricane	Experimental study (with control group)	Individual	62 adolescents aged 12-19 years 52 adolescents (control group)	Levels of cortisol, gender, exposed vs not exposed		SNS activity	2 months post disaster	Psychological functioning hypothalamic-pituitary-adrenal activity
Vijayakumar, L., Kannan, G. K., & Daniel, S. J. (2006).	Tsunami (Southeast Asia)	Cross-Sectional	Individual and Interpersonal	230 children aged 11-14 years	Disaster exposure, tsunami-related factors demographics,			12 months post disaster	PTSD

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

					pre-existing psychopathology of the children, family mental health				
Wang, M., Armour, C., Li, X., Dai, X., Zhu, X., & Yao, S. (2013).	Earthquake (China)	Cross-Sectional	Individual	571 adolescent aged 12-17 years	Gender				PTSD
Wang, Wei; Fu, Wei; Wu, Jin; Ma, Xian-cang; Sun, Xue-li; Huang, Yi; Hashimoto, Kenji; Gao, Cheng-ge; (2012).	Earthquake (China)	Cross-Sectional	Individual	1841 students aged 11-20 years	Age, gender, grade, disaster exposure, impact of event, personal experiences during the earthquake, living environment			10 months post disaster	PTSD Depression
Ward, M. E., Shelley, K., Kaase, K., & Pane, J. F. (2008).	Hurricane (USA)	Cross-Sectional	Individual	Pre-kindergarten to 12 th grade students	Demographic characteristics, displaced vs no displaced			in the first two years post disaster	Achievement and behavior
Wasserstein, S. B., & La Greca, A. M. (1998).	Hurricane (USA)	Cross-Sectional	Individual, Interpersonal and Intergroup	89 elementary School children 4 th to 6 th grades	Gender, ethnicity, perceived parental conflict, anxiety level,			3 months post disaster	PTSD Anxiety

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

					disaster exposure				
Weems, C. F., Pina, A. A., Costa, N. M., Watts, S. E., Taylor, L. K., & Cannon, M. F. (2007).	Hurricane (USA)	Pre-post (without control group)	Individual	52 youths age M= 11.35	Pre-disaster child trait anxiety, gender, elevated negative affect			Pre-disaster 6-7 months post disaster	PTS Anxiety disorder symptoms
Weems, C. F., Russell, J. D., Graham, R. A., Neill, E. L., & Banks, D. M. 2014	Hurricane (USA)	Cross-sectional	Individual	1048 youths from 3 rd to 12 th grades	Disaster exposure, age, gender, anxiety control		Level of exposure Gender Age (less anxiety control in younger- on PTSD)	36-65 months post disaster	PTSD and Generalized Anxiety Disorder
Weems, C. F., Scott, B. G., Banks, D. M., & Graham, R. A. (2012).	Two Hurricane (Gustav and Katrina) (USA)	Longitudinal	Individual	141 children from 4 th to 8 th grades	TV viewing of disasters, perceptions of Self-harm, fear during the disaster		PTSD symptoms at Time 1 and Time 2	6 and 12 months before Gustav and 1 month post Gustav 24 months post Katrina (T1) 30 months post Katrina (T2) 1 month post Gustav (T3)	PTSD
Weems, C. F., Scott, B. G., Taylor, L. K.,	Hurricane (USA)	Longitudinal	Individual	202 children aged 8-15 years	Disaster exposure, distress,			24 months post disaster (T1)	Anxiety PTSD

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Cannon, M. F., Romano, D. M., & Perry, A. M. (2013).					PTSD symptoms, anxiety, time			30 months post disaster (T2)	Achievement
Weems, C. F., Taylor, L. K., Cannon, M. F., Marino, R. C., Romano, D. M., Scott, B. G., ... & Triplett, V. (2010).	Hurricane (USA)	Longitudinal	Individual	191 african american aged 8-15 years	Age, gender, exposure to traumatic experiences, time			24 Months post disaster (T1) 30 Months Post disaster (T2)	PTSD
Xie, Y., Wu, J., & Shen, G. (2019)	Earthquake (Tibet)	Cross-sectional	Individual	850 children 11 - 20 years old	Age, gender, grade, ethnicity, level of exposure, PTSD, depression			6 years after the earthquake	posttraumatic growth (PTG) and posttraumatic stress disorder (PTSD)
Xu, J., Xie, L., Li, B., Li, N., & Yang, Y. (2012).	Earthquake (China)	Cross-Sectional	Individual	21652 children aged 7-15 years	Gender, age, cultural differences, disaster exposure			12 months post disaster	Anxiety symptoms
Yagi, J., Fujiwara, T., Yambe, T., Okuyama, M., Kawachi, I., & Sakai, A. (2016).	Earthquake (Japan)	Cross - Sectional	Individual and Interpersonal	94 children, aged 5-7 years	Social capital, traumatic events, age	Care givers mental health, Child PTSD		2 years post disaster	Behavior problems
Yang, R., Xiang, Y. T., Shuai, L., Qian, Y., Lai, K. Y., Ungvari, G.	Earthquake (China)	Longitudinal	Individual	100 children Aged 9-13 years and 14-17 years	PTSD group (34 adopted) vs no PTSD group (66 orphan)			4 months post disaster (T1) 12 months post disaster	Executive functions

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

S., ... & Wang, Y. F. (2014).					exposure			(T2)	
Yeung, N. C., Lau, J. T., Yu, N. X., Zhang, J., Xu, Z., Choi, K. C., ... & Lui, W. W. (2016).	Earthquake (China)	Longitudinal	Individual	3577 students 5 th - 12 th grade	Exposure to earthquake-related imagery, content, perceptions and emotional reactions related to the disaster, prior traumatic experience, gender, age			1 month post disaster (T1) 6 months after the T1 (T2)	PTSD
Ying, L. H., Wu, X. C., & Chen, C. (2013).	Earthquake (China)	Cross-Sectional	Individual	3052 children aged 8-19 years	Age, gender, post-trauma experience, severity of disaster exposure			1 year post disaster	PTSD and depression
Ying, L., Wu, X., Lin, C., & Jiang, L. (2014).	Earthquake (China)	Cross-Sectional	Individual	788 adolescent aged 12-19 years	Severity of disaster exposure, trait resilience, age, gender		Resilience	12 and 18 months post disaster (T1-T2) 24 and 30 months Post disaster (T3-T4)	PTSD depressive symptoms
Yorbik, O., Akbiyik, D. I., Kirmizigul, P., &	Earthquake (Turkey)	Cross-Sectional	Individual	35 children aged 2-16 years	Age				PTSD

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Söhmen, T. (2004).									
Yoshida, H., Kobayashi, N., Honda, N., Matsuoka, H., Yamaguchi, T., Homma, H., & Tomita, H. (2016).	Earthquake (Japan)	Cross-Sectional	Individual	3337 children aged 9-15 years Parents Teachers	Experience of the disaster, prior traumatic experience, children's attitude toward memories of the disaster (rumination) , gender, grade			31 months post disaster	Posttraumatic growth Children PTSS
Zhang, J., Zhu, S., Du, C., & Zhang, Y. (2015).	Earthquake (China)	Longitudinal	Individual	2299 children aged 8-19 years	Age, ethnicity, gender, PTSD, symptoms, time			3 months post disaster (T1) 6 months Post disaster (T2)	PTSD somatic symptoms
Zhang, W., Rajendran, K., Ham, J., Finik, J., Buthmann, J., Davey, K., ... & Nomura, Y. (2018).	Hurricane (USA)	Longitudinal	Individual and Interpersonal	318 mother-child dyads	Objective exposure, subjective stress reaction			6 and 12 months post disaster (T1-T2) 18 and 24 months post disaster (T3-T4)	Developmental trajectory of temperament
Zhang, X., Liu, M., Zhu, M., Shi, J., & Cheng, L. (2010).	Earthquake (China)	Cross-Sectional	Individual	196 pre disaster and 116 post disaster orphans	Personality, impact of event			6 months post disaster	PTSD

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

				aged 8-18 years					
Zhang, Y., Kong, F., Wang, L., Chen, H., Gao, X., Tan, X., ... & Liu, Y. (2010).	Earthquake (China)	Cross-Sectional	Individual and Interpersonal	423 children and adolescents, aged 11-16 years	Highly exposed area and a lowly exposed area, disaster situation, exposure degree, family situation, times of experiencing other stressful events			12 months post disaster	Post-traumatic psychological reactions Coping styles
Zhang, Y., Zhang, J., Zhu, S., Du, C., & Zhang, W. (2015).	Earthquake (China)	Cross-Sectional	Individual	3053 children aged 8-19 years	Age, ethnicity, gender, disaster exposure, impact of event, PTSD			3 months post disaster	Somatic symptoms
Zhou, P., Zhang, Y., Wei, C., Liu, Z., & Hannak, W. (2016).	Earthquake (China)	Longitudinal	Individual	197 Students from 4 th to 8 th grade	Acute stress disorder, disaster exposure			2 months post disaster (T1) 6 months post disaster (T2) 12 months post disaster (T3)	PTSD

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Zhou, X., & Wu, X. (2016).	Earthquake (China)	Longitudinal	Individual	310 adolescents aged 12-19 years	Event-related rumination, time	Intrusive and deliberate rumination (At T2)		6 months post disaster (T1) 12 months post disaster (T2) 18 months post disaster (T3)	Post-traumatic Growth PTSD
Zhou, X., & Wu, X., Wenchao, W., Tian, Y. (2017).	Earthquake (China)	Longitudinal	Individual and Interpersonal	303 children 12-19 years	Social support, PTSD, posttraumatic growth			6 months post disaster (T1) 12 months post disaster (T2) 18 months post disaster (T3)	PTSD Post-traumatic Growth
Zhou, X., Wu, X., & Zhen, R. (2017).	Earthquake (China)	Cross-Sectional	Individual and Interpersonal	309 adolescents aged 12-18 years	Disaster exposure, social support, emotion regulation	Cognitive reappraisal Expressive suppression.		6 months post disaster	PTSD Post-traumatic Growth
Zhou, X., Wu, X., & Zhen, R. (2018)	Earthquake (China)	Cross-sectional	Individual	591 children 11- 19 years old	age, sex, traumatic exposure.			1 year after the earthquake	Posttraumatic stress disorder (PTSD) and posttraumatic growth (PTG)
Zhou, X., Wu, X., Zhen, R.,	Earthquake (China)	Longitudinal	Individual	391 youth aged 12-19 years	Disaster exposure, age			12 and 18 months post disaster	PTSD

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Wang, W., & Tian, Y. (2018).					gender			(T1-T2) 24 and 30 months post disaster (T3-T4)	
Zhou, X., Zhen, R., & Wu, X. (2017)	Earthquake (China)	Cross-sectional	Individual	736 children 12-19 years old	PTSD and control beliefs Gender Age		primary control beliefs	1 year after the earthquake	Academic burnout

Note. Although some studies have been classified as experimental, most of them have a quasi-experimental design, since assignment to conditions was not completely random but determined by exposure or not to a disaster. PTSD= Posttraumatic Stress Disorder; PTSS= Posttraumatic Stress Symptoms; PTS = Posttraumatic Symptoms; GAD= Generalized Anxiety Disorder; ASD= Autistic Spectrum Disorder

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Table 2_ OSM. Reviews and meta-analyses (N = 28)

Study	Disaster	Type	Number of studies considered	Predictor(s)	Moderator(s)	Dependent Variable(s)
Brown, R. C., Witt, A., Fegert, J. M., Keller, F., Rassenhofer, M., & Plener, P. L. (2017)	Man-made and natural disasters	Meta-analysis and systematic review	36 studies		Profession of treatment providers Treatment setting (individual or group) Assessment method of PTSD	Efficacy of Psychosocial interventions for children, (CBT, EMDR, KIDNET and classroom-based interventions)
Cartwright, C., Hall, M., & Lee, A. C. K. (2017)	Earthquake	Review	152 studies			
Drury, S. S., Scheeringa, M. S., & Zeanah, C. H. (2008)	Hurricane	Review	7 studies			
Farooqui, M., Quadri, S. A., Suriya, S. S., Khan, M. A., Ovais, M., Sohail, Z., et al. (2017)	Earthquake	Review	77 studies			
Forman-Hoffman, V. L., Zolotor, A. J., McKeeman, J.	Accidents, natural disasters, war	Review	25 studies			

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

L., Blanco, R., Knauer, S. R., Lloyd, S. W., & Viswanathan, M. (2013)						
Fu, C., & Underwood, C. (2015)	Natural and/or man-made disaster.	Meta-analysis and review	11 studies (4 from natural disasters and 7 from conflict-affected areas)			Effectiveness of school-based mental-health and psychosocial interventions on PTSD
Furr, J. M., Comer, J. S., Edmunds, J. M., & Kendall, P. C. (2010)	Natural and Man-Made Disasters	Meta-analysis	96 studies	Gender, disaster exposure and study methodology (i.e., measurement quality, informant, timing of assessment)		PTS
Gordon-Hollingsworth, A. T., Yao, N., Chen, H., Qian, M., & Chen, S. (2015)	Natural Disaster	Meta-analysis	59 studies	Age, gender, father level of education, urban versus rural residence, experience of prior trauma, bereavement, having a family member injured, knowing someone other than a family member injured or killed, witnessing someone get injured or killed, suffering personal injury during the trauma, becoming trapped or buried, house damage, loss of property, trauma severity, perceived threat or fear during	Type of disaster, first evaluative time-point, disaster severity	PTSD

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

				the natural disaster, positive coping, displacement, social support		
Jackson, S. F., Fazal, N., Gravel, G., & Papowitz, H. (2017)	Natural Disasters	Review	16 studies			
Kar, N. (2011)	Various type of disaster	Review	31 studies			
Lai, B. S., Lewis, R., Livings, M. S., La Greca, A. M., & Esnard, A. M. (2017)	Natural or man-made disaster	Review	8 studies			
McLean, M. A., Cobham, V. E., & Simcock, G. (2018)	Various type of disaster	Review	13 studi			
Mercuri, A., & Angelique, H. L. (2004)	Natural, Technological, Na-Tech Disasters	Review	22 studies			
Murphy, S. A. (2010)	Mass Disaster and Terrorist Attacks	Review	10 studies			
Norris, F. H., Friedman, M. J., Watson, P. J., Byrne, C. M., Diaz, E., & Kaniasty, K. (2002)	Natural, Technological, Mass violence	Review	160 studies			
Pfefferbaum, B., Newman,	Disasters and Terrorism	Review	85 studies			

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

E., & Nelson, S. D. (2014)						
Pfefferbaum, B., Nitiéma, P., & Newman, E. (2019)	Accidents, natural disasters, terrorism, war	Meta-analysis	24 studies	Type of disaster Income Type of intervention Lenght of the intervention		Intervention Effects on Depression and/ or Anxiety
Pfefferbaum, B., Nitiéma, P., Tucker, P., & Newman, E. (2017).	Natural and Man-Made Disasters	Review	11 studies			
Pfefferbaum, B., Varma, V., Nitiéma, P., & Newman, E. (2014)	Disasters and Terrorism	Review	48 studies			
Pfefferbaum, B., Weems, C. F., Scott, B. G., Nitiéma, P., Noffsinger, M. A., Pfefferbaum, R. L., et al. (2013)	Terrorist attacks, Tsunami, Hurricane	Review	165 studies			
Pine, D. S., & Cohen, J. A. (2002)	Natural and Man-Made Disasters	Review	32 studies			
Rubens, S. L., Felix, E. D., & Hambrick, E. P. (2018)	Natural Disasters	Meta-Analysis	88 studies	Disaster exposure	Countries with a medium Human Development Index	Internalizing and Externalizing Problems
Saulnier, D. D., & Brolin, K. (2015)	Natural and Man-Made Disasters	Review	47 studies			
Tang, B., Liu, X., Liu, Y., Xue, C., &	21 articles on earthquakes,	Meta-analysis	31 studies on adults, 7 on children	For adults: female; not married; holding religious beliefs; poor		Depression

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Zhang, L. (2014)	7 on hurricanes/tornadoes/typhoons, 2 on tsunamis, and 1 on floods.			education; prior trauma; experiencing fear, injury, or bereavement during the disaster; or losing employment or property, house damage For children: prior trauma; being trapped; experiencing injury, fear, or bereavement during the disaster; witnessing injury/death during the disaster; poor social support.		
Tolin, D. F., & Foa, E. B. (2006)	Natural and Man-Made Disasters	Meta-analyses	290 studies	Gender		PTSD
Udomratn, P. (2009)	Tsunami	Review	25 studies			
Vogel, J. M., & Vernberg, E. M. (1993)	Natural and Man-Made Disasters	Review	33 studies			
Wang, C. W., Chan, C. L. W., & Ho, R. T. H. (2013)	Natural Disasters	Review	60 cross sectional studies; 25 longitudinal studies			

Note. PTSD = Posttraumatic Stress Disorder; PTS = Posttraumatic Symptoms; CBT = Cognitive-Behavioural Therapy; EMDR = Eye Movement Desensitization and Reprocessing

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Table 3_OSM. Studies on interventions (*N* = 29 studies)

Study	Disaster	Population	Independent variable(s)	Assessment(s) (months postdisaster)	Dependent variable(s)
Adúriz, M. E., Bluthgen, C., & Knopfler, C. (2009)	Flood (Argentina)	124 children 4-17 years	One-session group eye movement desensitization and reprocessing (EMDR)	3 months after flood, 3 months follow-up evaluation session	Distress Child's Reaction to Traumatic Events
Amin, R., Nadeem, E., Iqbal, K., Asadullah, M. A., & Hussain (2020)	Flood (Pakistan)	75 children 7-13 years old	Support for Students Exposed to Trauma (SSET) program	2 years after flood, 6 months follow-up evaluation session	PTSD resilience social support
Bahar, Z., Ozturk, M., Beser, A., Baykara, A., Eker, G., & Cakaloz, B. (2008).	Earthquake (Turkey)	187 students 7th grade	Socioeconomic status Gender Age Problem-based group therapy and occupational therapy	6 months after the earthquake	Depression
Berger R, & Gelkopf M. (2009)	Tsunami (Sri Lanka)	166 students 9-15 years	Intervention (ERASE Stress Sri Lanka') vs control group or waiting list Exposure and previous traumatic experience Content of Intervention: psychoeducational material, cognitive-behavioral skills, meditative practices and bio-energetic exercises utilizing	1 week prior and 3 months after the intervention	PTSD, Functional problems Somatic complaints Depression

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

			art therapy and narrative techniques		
Catani C, Kohiladevy M, Ruf M, Schauer E, Elbert T, & Neuner F. (2009)	Tsunami (Sri Lanka)	31 children 8-14 years	6 sessions Narrative Exposure Therapy for children (KIDNET) or 6 sessions of meditation-relaxation therapy (MED-RELAX)	Intervention few weeks after tsunami 1 month post-test/ 6 months follow-up	PTSD Level of functioning Physical health
Chemtob, C. M., Nakashima, J., & Carlson, J. G. (2001)	Hurricane (Hawaii)	32 children 6-12 years	3 sessions of EMDR Experienced hurricane-related symptoms PTSD	3, 5 years after hurricane Pretreatment, Posttreatment, and Follow-Up 6 months	PTSD Anxiety Depression
Fernandez, I. (2007)	Earthquake (Italy)	22 children, 6 years	3 sessions of EMDR PTSD	1 month, 3 months and a year after the event	PTSD
Field, T. M., Seligman, S., Scafidi, F., & Schanberg, S. (1996)	Hurricane Florida	60 children 1st–5th graders	Massage therapy or video attention group (control group) Hurricane impact PTSD Anxiety Salivary cortisol levels		Anxiety Depression Mood state Salivary cortisol levels
Fu C, Leoutsakos JM, & Underwood C. (2013)	Earthquake (Sichuan)	4120 children 6-16 years	Sociodemographics factors	1 year after disaster	PTSD

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

			Earthquake-related risk exposure Resilience		
Garfin, D. R., Silver, R. C., Gil-Rivas, V., Guzmán, J., Murphy, J. M., Cova, F., ... Guzmán, M. P. (2014)	Earthquake (Chile)	117 children 7-8 years,	Exposure Family Context School-Based Mental Health Program Gender	9 months post-earthquake	PTS Earthquake-related worry
Giannopoulou, I., Dikaiakou, A., & Yule, W. (2006)	Earthquake (Athens)	20 children 8-12 years	6 weeks Group cognitive-behavioural intervention Group 1 (N = 10), which started treatment 2 months after the earthquake and Group 2 (N = 10), which started treatment after 4 months PTSD	Intervention: 2 months and 4 months after earthquake Assessment: before treatment (T1), immediately after completing the treatment (T2), at first follow-up 18 MONTHS (T3) and at the second follow-up 4-year follow-up.	PTSD Depression Psychosocial functioning.
Goenjian, A. (1993)	Earthquake (Armenia)	582 children 6-12 years	Mental Health Relief Programme	3-6 months after earthquake	PTSD Major depressive disorder
Graham, R. A., Osofsky, J. D., Osofsky, H. J., & Hansel, T. C. (2017)	Hurricane (Louisiana)	112 students 8-17 years	Cognitive Behavioral Intervention for Trauma in Schools (CBITS) Individual treatment at school including: relaxation,	4 months after Hurricane	Anxiety Depression Anger PTS Dissociation

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

			<p>coping, and problem solving skill development; trauma narratives; and cognitive restructuring</p>		
<p>Hansel, T. C., Osofsky, H. J., Osofsky, J. D., & Speier, A. H. (2019)</p>	<p>Hurricane (USA)</p>	<p>4.593 children 7-14 years old</p>	<p>School-based trauma interventions</p>		<p>PTSD</p>
<p>Ho, R. T. H., Lai, A. H. Y., Lo, P. H. Y., Nan, J. K. M., & Pon, A. K. L. (2016)</p>	<p>Earthquake (Sichuan)</p>	<p>112 children Grade 4</p>	<p>Gender Self-Efficacy, Peer Support, and Anxiety Arts and play support program (promotion of self-efficacy, peer support positive thinking and problem solving) Control group</p>	<p>Baseline: 1 year after the earthquake Post test: 2 years after</p>	<p>Self-Efficacy Peer Support Anxiety</p>
<p>Jarero, I., Artigas, L., & Hartung, J. (2006).</p>	<p>Hurricane (Mexico)</p>	<p>44 children 8-15 years</p>	<p>EMDR Integrative Group Treatment Protocol</p>	<p>1 months after hurricane</p>	<p>Distress</p>
<p>Karairmak, Ö., & Aydin, G. (2008).</p>	<p>Earthquake (Turkey)</p>	<p>166 elementary school students 4th-8th grade</p>	<p>Gender Group (victims vs non victims) Activity-based cognitive fear reduction (ABCF): understand that natural disasters would occur and develop coping skills and strategies for normalization</p>		<p>Earthquake-related fears</p>
<p>Klontz, B. T., Bivens, A., Michels, S., DeLeon, P. H., & Tom, L. (2015).</p>	<p>Hurricane (Hawaii)</p>	<p>179 children 5-16 years</p>	<p>School-based behavioral health services: Mokihana Program</p>	<p>1 year follow up after treatment</p>	<p>Behavioral problems and adaptive functioning</p>

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

			Focus on responding to the needs of the child and family Behavioral problems and adaptive functioning		
Liu, Z., Zhu, Z., Kao, H. S. R., Zong, Y., Tang, S., Xu, M., ... Wang, R. (2014)	Earthquake (China)	Experiment 1: 210 children Experiment 2 80 children 11 years	Group Calligraphy Intervention Group Control Gender Age Time	1 year after exposure to natural disaster Post intervention assessment: after 15 days after 30 days	Intrusion Avoidance Hyperarousal symptoms PTSD Salivary cortisol
Pityaratstian, N., Piyasil, V., Ketumarn, P., Sitdhiraksa, N., Ularntinon, S., & Pariwatcharakul, P. (2015).	Tsunami	36 children 10-15 years who had been diagnosed with PTSD 4 years after the tsunami were randomly allocated to either	Diagnosis with PTSD 4 years after tsunami CBT (cognitive behavioural therapy) or wait list	Posttreatment and 1-month follow up	PTSD
Powell, T. M., & Bui, T. (2016).	Tornado (Oklahoma)	110 youth 11-15 years	Journey of Hope Intervention group Control group Coping skills self-efficacy, prosocial behaviors, distress.	9 months after the tornado 1 month after post-test	Coping skills Self-efficacy Prosocial behaviors, Distress
Powell, T., & Thompson, S. J. (2016)	Tornado (Alabama)	102 students 8-12 years	Journey of Hope (JoH), a school-based intervention Control group Coping skills peer relationships	5-8 months after the disaster	Coping skills Peer relationships
Rousseau, C., Benoit, M., Lacroix, L., & Gauthier, M. F. (2009).	Tsunami (South Asia)	105 children 4-6 years	Sandplay program Group Control Group Socio-economics factors	Pretest just before the tsunami Posttest 6 months after disaster	Emotional and behavioral symptoms Anxiety Depression Distress Social Impairment

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

					Burden for others
Salloum, A., & Overstreet, S. (2008)	Hurricane (New Orleans)	56 children 7-12 years	Group community-based grief and trauma intervention Group individual intervention disaster-related exposure Demographic information Time of assessment PTSD Disaster-related Exposure Depression Traumatic grief Distress	4 months post-Hurricane preintervention, postintervention, 3 weeks follow-up	PTSD Depression Traumatic grief Distress
Shen, Y. J. (2002)	Earthquake (Taiwan)	65 children 8-12 years	Child-centered group play therapy Control group	Pretests and posttests within 2 weeks of the treatment.	Anxiety Depression Adjustment
Stasiak, K., Merry, S. N., Frampton, C., & Moor, S. (2016)	Earthquake (New Zealand)	42 children 7-18 years old	Online cognitive behaviour therapy (CBT)	14–20 months after the earthquake	Anxiety Depression Health-related quality of life
Trentini, C., Lauriola, M., Giuliani, A., Maslovaric, G., Tambelli, R., Fernandez, I., & Pagani, M. (2018)	Earthquake (Italy)	332 children 5 -13 years old	EMDR Integrative Group Treatment Protocol (EMDR-IGTP) Time Elapsed Age Gender	3 weeks after earthquake	Distress, Anxiety, Depression, Anger Need Help
Vijayakumar, L., Kannan, G. K., Ganesh Kumar, B., & Devarajan, P. (2006).	Tsunami (Asia)	135 children 11-14 years	Socio-demographic factors Exposure Psychopathology of the children Family mental health Psychosocial intervention	1 year after tsunami before and after intervention (9 months after the initial assessment)	PTSD Hyperactivity

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

<p>Wolmer, L., Laor, N., Dedeoglu, C., Siev, J., & Yazgan, Y. (2005).</p>	<p>Earthquake (Turkey)</p>	<p>287 children 9-17 years</p>	<p>School Reactivation Program Socio-demographic information Stressful/traumatic episodes before and after the earthquake Exposure Academic performance, Social behavior PTSD Time</p>	<p>3.5 years after the earthquake post-intervention assessment 3 years later</p>	<p>PTSD Grief Dissociation</p>
---	----------------------------	------------------------------------	--	---	--

Note. PTSD = Posttraumatic Stress Disorder; PTS = Posttraumatic Symptoms; CBT = Cognitive-Behavioural Therapy; EMDR = Eye Movement Desensitization and Reprocessing

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Table 4_OSM. Frequency of natural disasters ($N = 294$ studies)

DISASTER	
Earthquake	1126
Hurricane	92
Tsunami	27
Flood	20
Tornado	15
Cyclone/ Typhoon	8
Ice Storm	4
War/Violence	3
Lightning Strike	3
Gulf Oil Spill	2
Storm	5
Eruption	2

Note. The sum is higher than the total number of studies, because some studies included the analysis of two or more types of disasters.

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Table 5_OSM. Study design ($N = 294$ studies)

DESIGN	
Cross-sectional	182
Longitudinal	78
Pre-post without control group	13
Experimental with control group	11
Pre-post and longitudinal	6
Experimental without control group	2
Pre-post with control group	1
Experimental (with control group) longitudinal	1

Table 6_OSM. Level of analysis ($N = 294$ studies)

LEVEL	
Individual	172
Individual and Interpersonal	108
Individual and Intergroup	5
Individual, Interpersonal and Intergroup	6
Individual, Interpersonal and Group	1
Individual, Interpersonal, Group and Intergroup	1

Note. Studies included in one category are not included in other categories.

Table 7_OSM. Frequency of main independent variables ($N = 294$ studies)

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

INDEPENDENT VARIABLES	
Exposure	168
Gender	139
Age	132
Stress/Distress	36
Support	34
Time	31
Social Level (Status, Living Conditions, Demographic, Socioeconomic factors)	35
Type Of Disaster	24
Coping/Appraisal/Resilience	23
Parental Stress	25
Family Functioning	20
Ethnicity	21
PTSD	20
Impact of Event	17
Anxiety	15
School Grade	16
Material Loss	14
Parental Loss	12
Depression	13
Prenatal Exposure	9
Parents Level of Education	11
Previous Traumatic Experiences	7
Disaster Relocation	6
Children Pre disaster disorders	6
Life Threat	4
Child Level of education	5
Rumination	4
Social Connection	3
Parents Pre disaster Disorders	4
Religion	4
Injury and Illness	3
Academic Skills	2
Abuse/Neglect	1
Sleeping Problems	2
Verbal Ability	1
Children's Trauma Recollections	1
Marital Status	6
Maternal Prenatal Depression	5
Maternal Anxiety	3
Parental Conflict	1
Maternal Cortisol Concentration	1
Maternal Prenatal Stress	4

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Substance Use	1
Parent-Child Conflict	1
Maternal Age	3
Birth Complications	2
Stressful Life Events	4

Note. PTSD=posttraumatic stress disorder. The sum is higher than the total number of studies, because some studies included two or more independent variables.

Table 8_OSM. Frequency of main dependent variables (N = 294 studies)

DEPENDENT VARIABLES	
PTSD	119
Depression/ Thoughts of Suicide	43
Anxiety (GAD)	30
Adaptation Score, Adjustment Disorder	22
PTSS	21
Internalizing/Externalizing Problems	15
Post Traumatic Growth	14
Behavioural and Emotional Problems	12
Physical Health (Somatic Symptoms, Ecc.)	12
Coping/Appraisal	11
Psychological Impact and Reactions	9
Distress	9
Mental Disorders	9
Parental Health	6
Cognitive Functions	7
Temperamental and Personal Characteristics	8
School Performance	4
Rumination and Intrusive Thoughts	3
Family Functioning	3
Memory Functions	2
Social Problems Risk	2
Tom and Metacognition	2
Psychiatric Disorders	2
Contact and Helping Intentions	2
Child Cortisol Concentration	1

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Child Motor Development	1
Resilience	1
Neural Reactivity	1
Electrodermal Activity	1

Note. PTSD= Posttraumatic Stress Disorder; PTSS= Posttraumatic Stress Symptoms; GAD= Generalized Anxiety Disorder. The sum is higher than the total number of studies, because some studies included two or more dependent variables.

Table 9_OSM. Frequency of the geographical distribution of the studies ($N = 294$ studies).

GEOGRAPHICAL DISTRIBUTION OF THE STUDIES	
USA	122
China	50
Turkey	18
Japan	17
Southeast Asia	15
Australia	10
Italy	8
Haiti	7
Armenia	6
India	5
Sri Lanka	5
Puerto Rico	5
Greece	5
Canada	4
Chile	3
Nepal	3
Pakistan	2
Iceland	2

RESILIENCE IN CHILDREN AFTER NATURAL DISASTERS

Taiwan	2
Canada	4
Chile	3
Nepal	3
Pakistan	2
Iceland	2
Taiwan	2
Poland	1
Bangladesh	1
New Zealand	1
Iran	1
Antilles	1
Tibet	1

References of the studies included in the review

- Adebäck, P., Schulman, A., & Nilsson, D. (2017). Children exposed to a natural disaster: Psychological consequences eight years after 2004 tsunami. *Nordic Journal of Psychiatry, 72*, 75-81. doi:10.1080/08039488.2017.1382569
- Adúriz, M. E., Bluthgen, C., & Knopfler, C. (2009). Helping child flood victims using group EMDR intervention in Argentina: Treatment outcome and gender differences. *International Journal of Stress Management, 16*, 138-153. doi:10.1037/a0014719
- Agustini, E. N., Asniar, I., & Matsuo, H. (2011). The prevalence of long-term post-traumatic stress symptoms among adolescents after the tsunami in Aceh. *Journal of Psychiatric And Mental Health Nursing, 18*, 543-549. doi: 10.1111/j.1365-2850.2011.01702.x
- Amin, R., Nadeem, E., Iqbal, K., Asadullah, M. A., & Hussain, B. (2020). Support for Students Exposed to Trauma (SSET) Program: An Approach for Building Resilience and Social Support Among Flood-Impacted Children. *School Mental Health, 12*, 493-506. doi:10.1007/s12310-020-09373-y
- Andrades, M., García, F. E., Calonge, I., & Martínez-Arias, R. (2018). Posttraumatic growth in children and adolescents exposed to the 2010 earthquake in Chile and its relationship with rumination and posttraumatic stress symptoms. *Journal of Happiness Studies, 19*, 1505-1517. doi:10.1007/s10902-017-9885-7
- Andrades, M., García, F. E., Reyes-Reyes, A., Martínez-Arias, R., & Calonge, I. (2016). Psychometric properties of the Posttraumatic Growth Inventory for Children in Chilean population

affected by the earthquake of 2010. *American Journal of Orthopsychiatry*, 86, 686-692.
doi:10.1037/ort0000182

Anthony, J. L., Lonigan, C. J., & Hecht, S. A. (1999). Dimensionality of posttraumatic stress disorder symptoms in children exposed to disaster: results from confirmatory factor analyses. *Journal of abnormal psychology*, 108, 326-336. doi:10.1037//0021-843X.111.4.637

Arnberg, F. K., Gudmundsdóttir, R., Butwicka, A., Fang, F., Lichtenstein, P., Hultman, C. M., & Valdimarsdóttir, U. A. (2015). Psychiatric disorders and suicide attempts in Swedish survivors of the 2004 southeast Asia tsunami: a 5 year matched cohort study. *The Lancet Psychiatry*, 2, 817-824. doi:10.1016/S2215-0366(15)00124-8

Asarnow, J., Glynn, S., Pynoos, R. S., Nahum, J., Guthrie, D., Cantwell, D. P., & Franklin, B. (1999). When the earth stops shaking: Earthquake sequelae among children diagnosed for pre-earthquake psychopathology. *Journal of the American Academy of Child & Adolescent Psychiatry*, 38, 1016-1023. doi:10.1097/00004583-199908000-00018

Austin, M. P., Christl, B., McMahon, C., Kildea, S., Reilly, N., Yin, C., ... & King, S. (2017). Moderating effects of maternal emotional availability on language and cognitive development in toddlers of mothers exposed to a natural disaster in pregnancy: The QF2011 Queensland Flood Study. *Infant Behavior and Development*, 49, 296-309. doi:10.1016/j.infbeh.2017.10.005

Ayub, M., Poongan, I., Masood, K., Gul, H., Ali, M., Farrukh, A., ... & Naeem, F. (2012). Psychological morbidity in children 18 months after Kashmir Earthquake of 2005. *Child Psychiatry & Human Development*, 43, 323-336. doi:10.1007/s10578-011-0267-9

- Azarian, A., Miller, T. W., & Skriptchenko-Gregorian, V. (1996). Baseline assessment of children traumatized by the Armenian earthquake. *Child Psychiatry and Human Development*, *27*, 29-41. doi:10.1007/BF02353444
- Azarian, A., Skriptchenko-Gregorian, V., Miller, T. W., & Kraus, R. F. (1994). Childhood trauma in victims of the Armenian earthquake. *Journal of Contemporary Psychotherapy*, *24*, 77-85. doi:10.1007/BF02310246
- Bahar, Z., ÖZtürk, M., Beşer, A., Baykara, A., Eker, G., & Çakaloz, B. (2008). Evaluation of interventions based on depression sign scores of adolescents. *Social Behavior and Personality: An International Journal*, *36*, 123-134. doi:10.2224/sbp.2008.36.1.123
- Bahrack, L. E., Parker, J. F., Fivush, R., & Levitt, M. (1998). The effects of stress on young children's memory for a natural disaster. *Journal of Experimental Psychology: Applied*, *4*, 308-331. doi:10.1016/S1041-6080(97)90004-2
- Bal, A. (2008). Post-traumatic stress disorder in Turkish child and adolescent survivors three years after the Marmara earthquake. *Child and Adolescent Mental Health*, *13*, 134-139. doi:10.1111/j.1475-3588.2007.00469.x
- Bal, A., & Jensen, B. (2007). Post-traumatic stress disorder symptom clusters in Turkish child and adolescent trauma survivors. *European Child & Adolescent psychiatry*, *16*, 449-457. doi:10.1007/s00787-007-0618-z
- Bauer, P. J., Burch, M. M., Van Abbema, D. L., & Ackil, J. K. (2007). Talking about twisters: Relations between mothers' and children's contributions to conversations about a devastating tornado. *Journal of Cognition and Development*, *8*, 371-399. doi:10.1080/15248370701612936

- Bauer, P. J., Stark, E. N., Lukowski, A. F., Rademacher, J., Van Abbema, D. L., & Ackil, J. K. (2005). Working together to make sense of the past: Mothers' and children's use of internal states language in conversations about traumatic and nontraumatic events. *Journal of Cognition and Development, 6*, 463-488. [doi:10.1207/s15327647jcd0604_2](https://doi.org/10.1207/s15327647jcd0604_2)
- Belter, R. W., Dunn, S. E., & Jeney, P. (1991). The psychological impact of Hurricane Hugo on children: A needs assessment. *Advances in Behaviour Research and Therapy, 13*, 155–161. doi:10.1016/0146-6402(91)90003-S
- Berger, R., & Gelkopf, M. (2009). School-based intervention for the treatment of tsunami-related distress in children: A quasi-randomized controlled trial. *Psychotherapy and Psychosomatics, 78*, 364-371. doi:10.1159/000235976
- Bhushan, B., & Sathya Kumar, J. (2007). Emotional distress and posttraumatic stress in children surviving the 2004 tsunami. *Journal of Loss and Trauma, 12*, 245-257. doi:10.1080/15325020600945996
- Blanc, J., Bui, E., Mouchenik, Y., Derivois, D., & Birmes, P. (2015). Prevalence of post-traumatic stress disorder and depression in two groups of children one year after the January 2010 earthquake in Haiti. *Journal of affective disorders, 172*, 121-126. doi:10.1016/j.jad.2014.09.055
- Bödvarsdóttir, Í., Elklit, A., & Gudmundsdóttir, D. B. (2006). Post-traumatic stress reactions in children after two large earthquakes in Iceland. *Nordic Psychology, 58*, 91-107. doi:10.1027/1901-2276.58.2.91
- Bokszczanin, A. (2008). Parental support, family conflict, and overprotectiveness: Predicting PTSD symptom levels of adolescents 28 months after a natural disaster. *Anxiety, Stress, & Coping, 21*, 325-335.

- Bradburn, I. S. (1991). After the earth shook: Children's stress symptoms 6-8 months after a disaster. *Advances in Behaviour Research and Therapy*, 13, 173-179. doi:10.1016/0146-6402(91)90005-U
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press. ISBN 0-674-22457-4.
- Bronfenbrenner, Urie (2005). *Making human beings human: Bioecological perspectives on human development*. Thousand Oaks, CA: Sage Publications.
- Brown, C. S., Mistry, R. S., & Bigler, R. S. (2007). Hurricane Katrina: African American children's perceptions of race, class, and government involvement amid a national crisis. *Analyses of Social Issues and Public Policy*, 7, 191-208. doi:10.1111/j.1530-2415.2007.00139.x
- Brown, R. C., Witt, A., Fegert, J. M., Keller, F., Rassenhofer, M., & Plener, P. L. (2017). Psychosocial interventions for children and adolescents after man-made and natural disasters: a meta-analysis and systematic review. *Psychological Medicine*, 47, 1893-1905. doi:10.1017/s0033291717000496
- Bulut, S. (2006). Comparing the earthquake exposed and non-exposed Turkish children's Post Traumatic Stress Reactions. *Anales de Psicología/Annals of Psychology*, 22, 29-36.
- Bulut, S. (2013). Prediction of post-traumatic stress symptoms via comorbid disorders and other social and school problems in earthquake exposed Turkish adolescents. *Revista Latinoamericana de Psicología*, 45, 47-61.
- Bulut, S., Bulut, S., & Tayli, A. (2005). The dose of exposure and prevalence rates of post traumatic stress disorder in a sample of Turkish children eleven months after the 1999 Marmara earthquakes. *School Psychology International*, 26, 55-70. doi.org/10.1177/0143034305050893

- Burke jr, J. D., Moccia, P., Borus, J. F., & Burns, B. J. (1986). Emotional distress in fifth-grade children ten months after a natural disaster. *Journal of the American Academy of Child Psychiatry*, 25, 536-541. doi:10.1016/S0002-7138(10)60014-3
- Burke, J. D., Borus, J. F., Burns, B. J., Millstein, K. H., & Beasley, M. C. (1982). Changes in children's behavior after a natural disaster. *The American Journal of Psychiatry*, 139, 1010-1014. doi:10.1176/ajp.139.8.1010
- Burnham, J. J., Hooper, L. M., Edwards, E. E., Tippey, J. M., McRaney, A. C., Morrison, M. A., ... & Woodroof, E. K. (2008). Examining children's fears in the aftermath of hurricane Katrina. *Journal of Psychological Trauma*, 7, 253-275. doi:10.1080/19322880802492229
- Buthmann, J., Finik, J., Ventura, G., Zhang, W., Shereen, A. D., & Nomura, Y. (2019). The children of Superstorm Sandy: Maternal prenatal depression blunts offspring electrodermal activity. *Biological Psychology*, 146, Article 107716. <https://doi.org/10.1016/j.biopsycho.2019.107716>
- Buthmann, J., Ham, J., Davey, K., Finik, J., Dana, K., Pehme, P., ... Nomura, Y. (2018). Infant Temperament: Repercussions of Superstorm Sandy-Related Maternal Stress. *Child Psychiatry & Human Development*, 50, 150-162. doi:10.1007/s10578-018-0828-2
- Cadamuro, A., Versari, A., Vezzali, L., & Trifiletti, E. (2016). Preventing the detrimental effect of posttraumatic stress in young children: The role of theory of mind in the aftermath of a natural disaster. *European Journal of Developmental Psychology*, 13, 52-66. doi:10.1080/17405629.2015.1055240
- Cadamuro, A., Versari, A., Vezzali, L., Giovannini, D., & Trifiletti, E. (2015, February). Cognitive performance in the aftermath of a natural disaster: The role of coping strategies, theory of mind and peer social support. *Child & Youth Care Forum*, 44, 93-113. doi:10.1007/s10566-014-9272-z

- Cao, X., Laplante, D. P., Brunet, A., Ciampi, A., & King, S. (2014). Prenatal maternal stress affects motor function in 5½-year-old children: Project Ice Storm. *Developmental psychobiology*, *56*, 117-125. doi:10.1002/dev.21085
- Cartwright, C., Hall, M., & Lee, A. C. K. (2017). The changing health priorities of earthquake response and implications for preparedness: A scoping review. *Public Health*, *150*, 60-70. doi:10.1016/j.puhe.2017.04.024
- Catani, C., Gewirtz, A. H., Wieling, E., Schauer, E., Elbert, T., & Neuner, F. (2010). Tsunami, war, and cumulative risk in the lives of Sri Lankan schoolchildren. *Child Development*, *81*, 1176-1191. doi: 10.1111/j.1467-8624.2010.01461.x
- Catani, C., Kohiladevy, M., Ruf, M., Schauer, E., Elbert, T., & Neuner, F. (2009). Treating children traumatized by war and Tsunami: A comparison between exposure therapy and meditation-relaxation in North-East Sri Lanka. *BMC Psychiatry*, *9*. doi:10.1186/1471-244x-9-22
- Celebi Oncu, E., & Metindogan Wise, A. (2010). The effects of the 1999 Turkish earthquake on young children: Analyzing traumatized children's completion of short stories. *Child Development*, *81*, 1161-1175. doi:10.1111/j.1467-8624.2010.01460.x
- Celebi Oncu, E., Akman, B., Guler, T., & Karaaslan, T. (2009). A report on traumatised and nontraumatised children's human figure drawings reflecting emotional effects of disastrous conditions. *Australasian Journal of Trauma Studies*, *1*. <http://www.massey.ac.nz/~trauma/issues/2009-1/oncu.htm>
- Cénat, J. M., & Derivois, D. (2015). Long-term outcomes among child and adolescent survivors of the 2010 Haitian earthquake. *Depression and Anxiety*, *32*, 57-63. doi:10.1002/da.22275.

- Chemtob, C. M., Nakashima, J., & Carlson, J. G. (2001). Brief treatment for elementary school children with disaster-related posttraumatic stress disorder: A field study. *Journal of Clinical Psychology, 58*, 99–112. doi:10.1002/jclp.1131
- Chen, J., & Wu, X. (2017). Posttraumatic Stress Symptoms and Posttraumatic Growth in Children and Adolescents Following an Earthquake: A Latent Transition Analysis. *Journal of Traumatic Stress, 30*, 583-592. doi:10.1002/jts.22238
- Chen, W., Wang, L., Zhang, X. L., & Shi, J. N. (2012). Understanding the impact of trauma exposure on posttraumatic stress symptomatology: A structural equation modeling approach. *Journal of Loss and Trauma, 17*, 98-110. doi:10.1080/15325024.2011.595293
- Cheng, J., Liang, Y., Fu, L., & Liu, Z. (2018) Posttraumatic stress and depressive symptoms in children after the Wenchuan earthquake. *European Journal of Psychotraumatology, 9*, 1472992. doi:10.1080/20008198.2018.1472992
- Cheng, J., Liang, Y.-M., Zhou, Y.-Y., Eli, B., & Liu, Z.-K. (2019). Trajectories of PTSD symptoms among children who survived the Lushan earthquake: a four-year longitudinal study. *Journal of Affective Disorders, 252*, 421-427. doi:10.1016/j.jad.2019.04.047
- Cobham, V. E., & McDermott, B. (2014). Perceived parenting change and child posttraumatic stress following a natural disaster. *Journal of Child and Adolescent Psychopharmacology, 24*, 18-23. doi:10.1089/cap.2013.0051
- Cryder, C. H., Kilmer, R. P., Tedeschi, R. G., & Calhoun, L. G. (2006). An exploratory study of posttraumatic growth in children following a natural disaster. *American Journal of Orthopsychiatry, 76*, 65-69. doi:10.1037/0002-9432.76.1.65

- Danielson, C. K., Cohen, J. R., Adams, Z. W., Youngstrom, E. A., Soltis, K., Amstadter, A. B., & Ruggiero, K. J. (2016). Clinical Decision-Making Following Disasters: Efficient Identification of PTSD Risk in Adolescents. *Journal of Abnormal Child Psychology*, *45*, 117-129.
- Danzi, B. A., & La Greca, A. M. (2017). Optimizing clinical thresholds for PTSD: Extending the DSM-5 preschool criteria to school-age children. *International Journal of Clinical and Health Psychology*, *17*, 234-241. doi:10.1016/j.ijchp.2017.07.001
- Dass-Brailsford, P., Thomley, R. S. H., Talisman, N. W., & Unverferth, K. (2015). Psychological effects of the 2010 Haitian earthquake on children: An exploratory study. *Traumatology*, *21*, 14-21. doi:10.1037/trm0000015
- Dawson, K. S., Joscelyne, A., Meijer, C., Tampubolon, A., Steel, Z., & Bryant, R. A. (2014). Predictors of chronic posttraumatic response in Muslim children following natural disaster. *Psychological Trauma: Theory, Research, Practice, and Policy*, *6*, 580-587. doi:10.1037/a0037140
- Delamater, A. M., & Applegate, E. B. (1999). Child development and post-traumatic stress disorder after hurricane exposure. *Traumatology*, *5*, 20-27. doi:10.1177/153476569900500303
- Demir, T., Demir, D. E., Alkas, L., Copur, M., Dogangun, B., & Kayaalp, L. (2010). Some clinical characteristics of children who survived the Marmara earthquakes. *European Child & Adolescent Psychiatry*, *19*, 125-133. doi:10.1007/s00787-009-0048-1
- Derivois, D., Cénat, J. M., Joseph, N. E., Karray, A., & Chahraoui, K. (2017). Prevalence and determinants of post-traumatic stress disorder, anxiety and depression symptoms in street children survivors of the 2010 earthquake in Haiti, four years after. *Child Abuse & Neglect*, *67*, 174-181. doi:10.1016/j.chiabu.2017.02.034

- Derivois, D., Mérisier, G. G., Cenat, J. M., & Castelot, V. (2014). Symptoms of posttraumatic stress disorder and social support among children and adolescents after the 2010 Haitian earthquake. *Journal of Loss and Trauma, 19*, 202-212. doi:10.1080/15325024.2013.789759
- Dollinger, S. J. (1985). Lightning-strike disaster among children. *British Journal of Medical Psychology, 58*, 375-383. doi:10.1111/j.2044-8341.1985.tb02656.x
- Dollinger, S. J. (1986). The measurement of children's sleep disturbances and somatic complaints following a disaster. *Child Psychiatry and Human Development, 16*, 148-153. doi:10.1007/BF00706172
- Dollinger, S. J., O'donnell, J. P., & Staley, A. A. (1984). Lightning-strike disaster: Effects on children's fears and worries. *Journal of Consulting and Clinical Psychology, 52*, 1028-1038. doi:10.1037/0022-006X.52.6.1028
- Drury, S. S., Scheeringa, M. S., & Zeanah, C. H. (2008). The traumatic impact of hurricane Katrina on children in New Orleans. *Child and Adolescent Psychiatric Clinics of North America, 17*, 685-702. doi:10.1016/j.chc.2008.02.005
- Durkin, M. S., Khan, N., Davidson, L. L., Zaman, S. S., & Stein, Z. A. (1993). The effects of a natural disaster on child behavior: Evidence for posttraumatic stress. *American Journal of Public Health, 83*, 1549-1553. doi:10.2105/AJPH.83.11.1549
- Dyb, G., Jensen, T. K., & Nygaard, E. (2011). Children's and parents' posttraumatic stress reactions after the 2004 tsunami. *Clinical Child Psychology and Psychiatry, 16*, 621-634. doi:10.1177/1359104510391048
- Earls, F., Smith, E., Reich, W., & Jung, K. G. (1988). Investigating psychopathological consequences of a disaster in children: a pilot study incorporating a structured diagnostic interview. *Journal of*

the American Academy of Child & Adolescent Psychiatry, 27, 90-95. doi:10.1097/00004583-198801000-00014

Ekşi, A., Braun, K. L., Ertem-Vehid, H., Peykerli, G., Saydam, R., Toparlak, D., & Alyanak, B. (2007). Risk factors for the development of PTSD and depression among child and adolescent victims following a 7.4 magnitude earthquake. *International Journal of Psychiatry in Clinical Practice*, 11, 190-199. doi:10.1080/13651500601017548

Endo, T., Shioiri, T., Someya, T., Toyabe, S., & Akazawa, K. (2007). Parental mental health affects behavioral changes in children following a devastating disaster: a community survey after the 2004 Niigata-Chuetsu earthquake. *General Hospital Psychiatry*, 29, 175-176. doi:10.1016/j.genhosppsych.2006.09.006

Evans, L. G., & Oehler-Stinnett, J. (2006). Structure and prevalence of PTSD symptomology in children who have experienced a severe tornado. *Psychology in the Schools*, 43, 283-295. doi:10.1002/pits.20150

Evans, L. G., & Oehler-Stinnett, J. (2008). Validity of the osu post-traumatic stress disorder scale and the behavior assessment system for children self-report of personality with child tornado survivors. *Psychology in the Schools*, 45, 121-131. doi:10.1002/pits.20285.

Exenberger, S., Ramalingam, P., & Höfer, S. (2016). Exploring posttraumatic growth in Tamil children affected by the Indian Ocean Tsunami in 2004. *International Journal of Psychology: Journal International de Psychologie*, 53, 397-401. doi.org/10.1002/ijop.12395.

- Exenberger, S., Riedl, D., Rangaramanujam, K., Amirtharaj, V., & Juen, F. (2019). A cross-sectional study of mother-child agreement on PTSD symptoms in a south Indian post-tsunami sample. *BMC Psychiatry, 19*, e414. doi:10.1186/s12888-019-2408-9
- Fan, F., Long, K., Zhou, Y., Zheng, Y., & Liu, X. (2015). Longitudinal trajectories of post-traumatic stress disorder symptoms among adolescents after the Wenchuan earthquake in China. *Psychological Medicine, 45*, 2885-2896. doi:10.1017/S0033291715000884
- Farooqui, M., Quadri, S. A., Suriya, S. S., Khan, M. A., Ovais, M., Sohail, Z., ... Hassan, M. (2017). Posttraumatic stress disorder: a serious post-earthquake complication. *Trends in Psychiatry and Psychotherapy, 39*, 135–143. doi:10.1590/2237-6089-2016-0029
- Felix, E. D., You, S. K., & Canino, G. (2013). School and community influences on the long term postdisaster recovery of children and youth following hurricane Georges. *Journal of Community Psychology, 41*, 1021-1038. doi.org/10.1002/jcop.21590
- Felix, E. D., You, S., & Canino, G. (2015). Family influences on the relationship between hurricane exposure and ataques de nervios. *Journal of Child and Family Studies, 24*, 2229-2240. [doi:10.1007/s10826-014-0025-2](https://doi.org/10.1007/s10826-014-0025-2)
- Felix, E., Hernández, L. A., Bravo, M., Ramirez, R., Cabiya, J., & Canino, G. (2011). Natural disaster and risk of psychiatric disorders in Puerto Rican children. *Journal of Abnormal Child Psychology, 39*, 589-600. [doi:10.1007/s10802-010-9483-1](https://doi.org/10.1007/s10802-010-9483-1)
- Felix, E., Kaniasty, K., You, S., & Canino, G. (2015). Parent-child relationship quality and gender as moderators of the influence of hurricane exposure on physical health among children and youth. *Journal of Pediatric Psychology, 41*, 73-85. doi:10.1093/jpepsy/jsv038.

- Felix, E., You, S., Vernberg, E., & Canino, G. (2013). Family influences on the long term post-disaster recovery of Puerto Rican youth. *Journal of Abnormal Child Psychology*, *41*, 111-124. doi:10.1007/s10802-012-9654-3
- Felton, J. W., Cole, D. A., & Martin, N. C. (2013). Effects of rumination on child and adolescent depressive reactions to a natural disaster: The 2010 Nashville flood. *Journal of Abnormal Psychology*, *122*, 64-73. doi:10.1037/a0029303
- Feo, P., Di Gioia, S., Carloni, E., Vitiello, B., Tozzi, A. E., & Vicari, S. (2014). Prevalence of psychiatric symptoms in children and adolescents one year after the 2009 L'Aquila earthquake. *BMC Psychiatry*, *14*, 270. doi:10.1186/s12888-014-0270-3
- Fernandez, I. (2007). EMDR as a treatment of post-traumatic reactions: A field study on child victims of an earthquake. *Educational and Child Psychology*, *24*, 65-72.
- Field, T., Seligman, S., Scafidi, F., & Schanberg, S. (1996). Alleviating posttraumatic stress in children following hurricane Andrew. *Journal of Applied Developmental Psychology*, *17*, 37-50. doi:10.1016/s0193-3973(96)90004-0
- Fivush, R., McDermott Sales, J., Goldberg, A., Bahrnick, L., & Parker, J. (2004). Weathering the storm: Children's long-term recall of hurricane Andrew. *Memory*, *12*, 104-118. doi:10.1080/09658210244000397
- Foa, E. B., Johnson, K. M., Feeny, N. C., & Treadwell, K. R. (2001). The Child PTSD Symptom Scale: A preliminary examination of its psychometric properties. *Journal of Clinical Child Psychology*, *30*, 376-384. doi:10.1207/S15374424JCCP3003_9

- Forman-Hoffman, V. L., Zolotor, A. J., McKeeman, J. L., Blanco, R., Knauer, S. R., Lloyd, S. W., & Viswanathan, M. (2013). Comparative effectiveness of interventions for children exposed to nonrelational traumatic events. *Pediatrics, 131*, 526-539. doi:10.1542/peds.2012-3846
- Fu, C., & Underwood, C. (2015). A meta-review of school-based disaster interventions for child and adolescent survivors. *Journal of Child & Adolescent Mental Health, 27*, 161-171. doi:10.2989/17280583.2015.1117978
- Fu, C., Leoutsakos, J.-M., & Underwood, C. (2013). Moderating effects of a postdisaster intervention on risk and resilience factors associated with Posttraumatic Stress Disorder in Chinese children. *Journal of Traumatic Stress, 26*, 663-670. doi:10.1002/jts.21871
- Fujiwara, T., Mizuki, R., Miki, T., & Chemtob, C. (2015). Association between facial expression and PTSD symptoms among young children exposed to the Great East Japan earthquake: a pilot study. *Frontiers in Psychology, 6*, 1534. doi:10.3389/fpsyg.2015.01534.
- Fujiwara, T., Yagi, J., Homma, H., Mashiko, H., Nagao, K., & Okuyama, M. (2017). Symptoms of post-traumatic stress disorder among young children 2 years after the Great East Japan earthquake. *Disaster Medicine and Public Health Preparedness, 11*, 207-215. doi:10.1017/dmp.2016.101
- Fujiwara, T., Yagi, J., Homma, H., Mashiko, H., Nagao, K., Okuyama, M., ... & Children Study Team. (2017). Suicide risk among young children after the Great East Japan earthquake: A follow-up study. *Psychiatry Research, 253*, 318-324. doi:10.1016/j.psychres.2017.04.018
- Furr, J. M., Comer, J. S., Edmunds, J. M., & Kendall, P. C. (2010). Disasters and youth: A meta-analytic examination of posttraumatic stress. *Journal of Consulting and Clinical Psychology, 78*, 765-780. doi:10.1037/a0021482

- Galante, R., & Foa, D. (1986). An epidemiological study of psychic. *Annual Progress in Child Psychiatry and Child Development*, 25, 357-363. [doi:10.1192/S0007125000175208](https://doi.org/10.1192/S0007125000175208)
- Garfin, D. R., Silver, R. C., Gil-Rivas, V., Guzmán, J., Murphy, J. M., Cova, F., ... Guzmán, M. P. (2014). Children's reactions to the 2010 Chilean earthquake: The role of trauma exposure, family context, and school-based mental health programming. *Psychological Trauma: Theory, Research, Practice, and Policy*, 6, 563-573. doi:10.1037/a0036584
- Garrison, C. Z., Bryant, E. S., Addy, C. L., Spurrier, P. G., Freedy, J. R., & Kilpatrick, D. G. (1995). Posttraumatic stress disorder in adolescents after hurricane Andrew. *Journal of the American Academy of Child & Adolescent Psychiatry*, 34, 1193-1201. [doi:10.1097/00004583-199509000-00017](https://doi.org/10.1097/00004583-199509000-00017)
- Ge, F., Yuan, M., Li, Y., Zhang, J., & Zhang, W. (2019). Changes in the network structure of posttraumatic stress disorder symptoms at different time points among youth survivors: A network analysis. *Journal of Affective Disorders*, 259, 288-295. <https://doi.org/10.1016/j.jad.2019.08.065>
- Giannopoulou, I., Dikaiakou, A., & Yule, W. (2006). Cognitive-behavioural group intervention for PTSD Symptoms in children following the Athens 1999 earthquake: A pilot study. *Clinical Child Psychology and Psychiatry*, 11, 543-553. doi:10.1177/1359104506067876
- Giannopoulou, I., Smith, P., Ecker, C., Strouthos, M., Dikaiakou, A., & Yule, W. (2006). Factor structure of the Children's Revised Impact of Event Scale (CRIES) with children exposed to earthquake. *Personality and Individual Differences*, 40, 1027-1037. doi:10.1016/j.paid.2005.11.002

- Giannopoulou, I., Strouthos, M., Smith, P., Dikaiakou, A., Galanopoulou, V., & Yule, W. (2006). Post-traumatic stress reactions of children and adolescents exposed to the Athens 1999 earthquake. *European Psychiatry, 21*, 160-166. doi:10.1016/j.eurpsy.2005.09.005
- Gil-Rivas, V., & Kilmer, R. P. (2013). Children's adjustment following Hurricane Katrina: the role of primary caregivers. *American Journal of Orthopsychiatry, 83*, 413-421. doi:10.1111/ajop.12016
- Goenjian, A. (1993). A mental health relief programme in Armenia after the 1988 earthquake. *British Journal of Psychiatry, 163*, 230-239. doi:10.1192/bjp.163.2.230
- Goenjian, A. K., Pynoos, R. S., Steinberg, A. M., Najarian, L. M., Asarnow, J. R., Karayan, I., ... & Fairbanks, L. A. (1995). Psychiatric comorbidity in children after the 1988: Earthquake in Armenia. *Journal of the American Academy of Child & Adolescent Psychiatry, 34*, 1174-1184. doi:10.1097/00004583-199509000-00015
- Goenjian, A. K., Walling, D., Steinberg, A. M., Roussos, A., Goenjian, H. A., & Pynoos, R. S. (2009). Depression and PTSD symptoms among bereaved adolescents 6½ years after the 1988 Spitak earthquake. *Journal of Affective Disorders, 112*, 81-84. doi:10.1016/j.jad.2008.04.006
- Gökçen, C., Şahingöz, M., & Annagür, B. B. (2013). Does a non-destructive earthquake cause posttraumatic stress disorder? A cross-sectional study. *European Child & Adolescent Psychiatry, 22*, 295-299. doi:10.1007/s00787-012-0348-8
- Gomez, C. J., & Yoshikawa, H. (2017). Earthquake effects: Estimating the relationship between exposure to the 2010 Chilean earthquake and preschool children's early cognitive and executive function skills. *Early Childhood Research Quarterly, 38*, 127-136. doi:10.1016/j.ecresq.2016.08.004

- Graham, R. A., Osofsky, J. D., Osofsky, H. J., & Hansel, T. C. (2017). School based post disaster mental health services: Decreased trauma symptoms in youth with multiple traumas. *Advances in School Mental Health Promotion, 10*, 161-175. doi:10.1080/1754730x.2017.1311798
- Green, B. L., Korol, M., Grace, M. C., Vary, M. G., Leonard, A. C., Gleser, G. C., & Smitson-Cohen, S. (1991). Children and disaster: Age, gender, and parental effects on PTSD symptoms. *Journal of the American Academy of Child & Adolescent Psychiatry, 30*, 945-951. doi:10.1097/00004583-199111000-00012
- Groome, D., & Soureti, A. (2004). Post-traumatic stress disorder and anxiety symptoms in children exposed to the 1999 Greek earthquake. *British Journal of Psychology, 95*, 387-397. doi:10.1348/0007126041528149
- Hafstad, G. S., Gil-Rivas, V., Kilmer, R. P., & Raeder, S. (2010). Parental adjustment, family functioning, and posttraumatic growth among Norwegian children and adolescents following a natural disaster. *American Journal of Orthopsychiatry, 80*, 248-257. doi:10.1111/j.1939-0025.2010.0102
- Hafstad, G. S., Kilmer, R. P., & Gil-Rivas, V. (2011). Posttraumatic growth among Norwegian children and adolescents exposed to the 2004 tsunami. *Psychological Trauma: Theory, Research, Practice, and Policy, 3*, 130-138. doi:10.1037/a0023236
- Hall, A., & Kirby, H. (2010). The numbers, educational status and health of enrolled and non-enrolled school-age children in the Allai Valley, Northwest Frontier Province, Pakistan. *Social Science & Medicine, 70*, 1131-1140. doi:10.1016/j.socscimed.2009.12.021
- Hambrick, E. P., O'connor, B. M., & Vernberg, E. M. (2016). Interview and recollection-based research with child disaster survivors: Participation-related changes in emotion and perceptions of

participation. *Psychological Trauma: theory, research, practice, and policy*, 8, 165-171.
doi:10.1037/tra0000071

Hambrick, E. P., Vernberg, E. M., Greenhoot, A. F., & Hendrickson, M. L. (2017). Recalling a Devastating Tornado: Qualities of Child Recollections and Associations with Mental Health Symptoms. *Journal of Child & Adolescent Trauma*, 11, 227-239. doi:10.1007/s40653-017-0199-z

Han, L., Zhang, Y., & Zheng, Y. (2012). Responses over time of child and adolescent survivors to the 2008 Wenchuan, China earthquake. *Social Behavior and Personality: an international journal*, 40, 1147-1152. doi:10.2224/sbp.2012.40.7.1147

Hansel, T. C., Osofsky, H. J., Osofsky, J. D., & Speier, A. H. (2019). Katrina inspired disaster screenings and services: School-based trauma interventions. *Traumatology*, 25, 133-141.
<https://doi.org/10.1037/trm0000178>

Hansel, T. C., Osofsky, J. D., Osofsky, H. J., & Friedrich, P. (2013). The effect of long-term relocation on child and adolescent survivors of hurricane Katrina. *Journal of Traumatic Stress*, 26, 613-620.
doi.org/10.1002/jts.21837

Hausman, E. M., Black, S. R., Bromet, E., Carlson, G., Danzig, A., Kotov, R., & Klein, D. N. (2020). Reciprocal effects of maternal and child internalizing symptoms before and after a natural disaster. *Journal of family psychology*. Advance online publication. <https://doi.org/10.1037/fam0000653>

Hensley-Maloney, L., & Varela, R. E. (2009). The influence of hurricane exposure and anxiety sensitivity on panic symptoms. *Child and Youth Care Forum*, 38, 135-149. doi:10.1007/s10566-009-9072-z

- Hizli, F. G., Taskintuna, N., Isikli, S., Kilic, C., & Zileli, L. (2009). Predictors of posttraumatic stress in children and adolescents. *Children and Youth Services Review, 31*, 349-354. doi:10.1016/j.chilyouth.2008.08.008.
- Hlodversdottir, H., Thorsteinsdottir, H., Thordardottir, E. B., Njardvik, U., Petursdottir, G., & Hauksdottir, A. (2018). Long-term health of children following the Eyjafjallajökull volcanic eruption: a prospective cohort study. *European Journal of Psychotraumatology, 9* (sup2), 1442601
- Ho, R. T. H., Lai, A. H. Y., Lo, P. H. Y., Nan, J. K. M., & Pon, A. K. L. (2016). A strength-based arts and play support program for young survivors in post-quake china: effects on self-efficacy, peer support, and anxiety. *The Journal of Early Adolescence, 37*, 805-824. doi:10.1177/0272431615624563
- Houlihan, D., Ries, B. J., Polusny, M. A., & Hanson, C. N. (2008). Predictors of behavior and level of life satisfaction of children and adolescents after a major tornado. *Journal of Psychological Trauma, 7*, 21-36.
- Hsu, C. C., Chong, M. Y., Yang, P., & Yen, C. F. (2002). Posttraumatic stress disorder among adolescent earthquake victims in Taiwan. *Journal of the American Academy of Child & Adolescent Psychiatry, 41*, 875-881. doi:10.1097/00004583-200207000-00022
- Huzziff, C. A., & Ronan, K. R. (1999). Prediction of children's coping following a natural disaster-the Mount Ruapehu eruptions: A prospective study. *Australasian Journal of Disaster and Trauma Studies, 1*, 1999-1. <http://massey.ac.nz/~trauma/>
- Itagaki, S., Harigane, M., Maeda, M., Yasumura, S., Suzuki, Y., Mashiko, H., ... & Mental Health Group of the Fukushima Health Management Survey. (2017). Exercise habits are important for the mental health of children in Fukushima after the Fukushima Daiichi disaster: The Fukushima

Health Management Survey. *Asia Pacific Journal of Public Health*, 29, 171-181.
doi:10.1177/1010539516686163

Iwadare, Y., Usami, M., Suzuki, Y., Ushijima, H., Tanaka, T., Watanabe, K., ... & Saito, K. (2014). Posttraumatic symptoms in elementary and junior high school children after the 2011 Japan earthquake and tsunami: Symptom severity and recovery vary by age and sex. *The Journal of Pediatrics*, 164, 917-921. doi: 10.1016/j.jpeds.2013.11.061

Jackson, S. F., Fazal, N., Gravel, G., & Papowitz, H. (2017). Evidence for the value of health promotion interventions in natural disaster management. *Health Promotion International*, 32, 1057-1066. doi:10.1093/heapro/daw029

Jarero, I., Artigas, L., & Hartung, J. (2006). EMDR integrative group treatment protocol: A postdisaster trauma intervention for children and adults. *Traumatology*, 12, 121-129.
doi:10.1177/1534765606294561

Jeney-Gammon, P., Daugherty, T. K., Finch Jr, A. J., Belter, R. W., & Foster, K. Y. (1993). Children's coping styles and report of depressive symptoms following a natural disaster. *The Journal of Genetic Psychology*, 154, 259-267. doi:10.1080/00221325.1993.9914739

Jensen, T. K., Ellestad, A., & Dyb, G. (2013). Children and adolescents' self-reported coping strategies during the Southeast Asian Tsunami. *British Journal of Clinical Psychology*, 52, 92-106. doi:10.1111/bjc.12003

- Jia, Z., Tian, W., He, X., Liu, W., Jin, C., & Ding, H. (2010). Mental health and quality of life survey among child survivors of the 2008 Sichuan earthquake. *Quality of Life Research, 19*, 1381-1391. doi:10.1007/s11136-010-9703-8
- Jieling, C., & Xinchun, W. (2017). Post-traumatic stress symptoms and post-traumatic growth among children and adolescents following an earthquake: A latent profile analysis. *Child and Adolescent Mental Health, 22*, 23-29. doi:10.1111/camh.12175
- Jones, R. T., Frary, R., Cunningham, P., Weddle, J. D., & Kaiser, L. (2001). The psychological effects of Hurricane Andrew on ethnic minority and Caucasian children and adolescents: A case study. *Cultural Diversity and Ethnic Minority Psychology, 7*, 103. doi:10.1037/1099-9809.7.1.103
- Jurgens, J. J., Houlihan, D., & Schwartz, C. (1996). Behavioral manifestations of adolescent school relocation and trauma. *Child & family behavior therapy, 18*, 1-8. doi:10.1300/J019v18n01_01
- Juth, V., Silver, R. C., Seyle, D. C., Widyatmoko, C. S., & Tan, E. T. (2015). Post-disaster mental health among parent-child dyads after a major earthquake in Indonesia. *Journal of Abnormal Child Psychology, 43*, 1309-1318. doi:10.1080/01650250042000113
- Kalantari, M., & Vostanis, P. (2010). Behavioural and emotional problems in Iranian children four years after parental death in an earthquake. *International Journal of Social Psychiatry, 56*, 158-167. doi:10.1177/0020764008101854
- Kar, N. (2011). Cognitive behavioral therapy for the treatment of post-traumatic stress disorder: A review. *Neuropsychiatric Disease and Treatment, 7*, 167-181. doi:10.2147/ndt.s10389
- Kar, N., Mohapatra, P. K., Nayak, K. C., Pattanaik, P., Swain, S. P., & Kar, H. C. (2007). Post-traumatic stress disorder in children and adolescents one year after a super-cyclone in Orissa, India:

Exploring cross-cultural validity and vulnerability factors. *BMC Psychiatry*, 7, 8.
doi:10.1186/1471-244X-7-8

Karairmak, Ö., & Aydin, G. (2008). Brief report: Reducing earthquake-related fears in victim and nonvictim children. *The Journal of Genetic Psychology*, 169, 177-186.
doi:10.3200/gntp.169.2.177-186

Kelley, M. L., Self-Brown, S., Le, B., Bosson, J. V., Hernandez, B. C., & Gordon, A. T. (2010). Predicting posttraumatic stress symptoms in children following Hurricane Katrina: A prospective analysis of the effect of parental distress and parenting practices. *Journal of Traumatic Stress*, 23, 582-590. doi:10.1002/jts.20573

Kessel, E. M., Nelson, B. D., Finsaas, M., Kujawa, A., Meyer, A., Bromet, E., ... Klein, D. N. (2019). Parenting style moderates the effects of exposure to natural disaster-related stress on the neural development of reactivity to threat and reward in children. *Development and Psychopathology*, 1-10. doi:10.1017/s0954579418001347

Kessel, E. M., Nelson, B. D., Kujawa, A., Hajcak, G., Kotov, R., Bromet, E. J., ... & Klein, D. N. (2018). Hurricane Sandy exposure alters the development of neural reactivity to negative stimuli in children. *Child Development*, 89, 339-348. doi:10.1111/cdev.12691

Kiliç, C., Kiliç, E. Z., & Aydin, I. O. (2011). Effect of relocation and parental psychopathology on earthquake survivor-children's mental health. *The Journal of Nervous and Mental Disease*, 199, 335-341. doi:10.1097/NMD.0b013e3182174ffa

Kiliç, E. Z., Kiliç, C., & Yılmaz, S. (2008). Is anxiety sensitivity a predictor of PTSD in children and adolescents? *Journal of Psychosomatic Research*, 65, 81-86.
doi:10.1016/j.jpsychores.2008.02.013

- Kiliç, E. Z., Özgüven, H. D., & Sayil, I. (2003). The psychological effects of parental mental health on children experiencing disaster: The experience of Bolu earthquake in Turkey. *Family Process, 42*, 485-495. doi:10.1111/j.1545-5300.2003.00485.x
- King, L. S., Osofsky, J. D., Osofsky, H. J., Weems, C. F., Hansel, T. C., & Fassnacht, G. M. (2015). Perceptions of trauma and loss among children and adolescents exposed to disasters a mixed-methods study. *Current Psychology, 34*, 524-536. doi.org/10.1007/s12144-015-9348-4
- King, S., & Laplante, D. P. (2005). The effects of prenatal maternal stress on children's cognitive development: Project Ice Storm. *Stress, 8*, 35-45. doi 10.1080/10253890500108391
- Kiser, L., Heston, J., Hickerson, S., Millsap, P., Nunn, W., & Pruitt, D. (1993). Anticipatory stress in children and adolescents. *American Journal of Psychiatry, 150*, 87-87. doi:10.1176/ajp.150.1.87
- Klontz, B. T., Bivens, A., Michels, S., DeLeon, P. H., & Tom, L. (2015). The Mokihana Program: The effectiveness of an integrated department of education and department of health school-based behavioral health approach. *Psychological Services, 12*, 101–111. doi:10.1037/a0038015
- Knight, L. A., & Sullivan, M. A. (2006). Preliminary development of a measure to assess children's trauma attributions. *Journal of Aggression, Maltreatment & Trauma, 13*, 65-78. doi.org/10.1300/J146v13n02_05
- Kolaitis, G., Kotsopoulos, J., Tsiantis, J., Haritaki, S., Rigizou, F., Zacharaki, L., ... & Liakopoulou, M. (2003). Posttraumatic stress reactions among children following the Athens earthquake of September 1999. *European Child & Adolescent Psychiatry, 12*, 273-280. doi.org/10.1007/s00787-003-0339-x
- Kopala-Sibley, D. C., Danzig, A. P., Kotov, R., Bromet, E. J., Carlson, G. A., Olino, T. M., ... & Klein, D. N. (2016). Negative emotionality and its facets moderate the effects of exposure to

Hurricane Sandy on children's postdisaster depression and anxiety symptoms. *Journal of Abnormal Psychology*, 125, 471-481. doi.org/10.1037/abn0000152

Kreuger, L., & Stretch, J. (2003). Identifying and helping long term child and adolescent disaster victims: Model and method, 30, 93-108. *Journal of Social Service Research*. doi.org/10.1300/J079v30n02_06

Kronenberg, M. E., Hansel, T. C., Brennan, A. M., Osofsky, H. J., Osofsky, J. D., & Lawrason, B. (2010). Children of Katrina: Lessons learned about postdisaster symptoms and recovery patterns. *Child Development*, 81, 1241-1259. doi:10.1111/j.1467-8624.2010.01465.x

Kroska, E. B., O'Hara, M. W., Elgeili, G., Hart, K. J., Laplante, D. P., Dancause, K. N., & King, S. (2018). The impact of maternal flood-related stress and social support on offspring weight in early childhood. *Archives of Women's Mental Health*, 21, 225-233. doi.org/10.1007/s00737-017-0786-x

Küçüköğlü, S., Yıldırım, N., & Dursun, O. B. (2015). Posttraumatic stress symptoms seen in children within the 3-month period after the Van earthquake in Turkey. *International Journal of Nursing Practice*, 21, 542-549. doi.org/10.1111/ijn.12305

Kujawa, A., Hajcak, G., Danzig, A. P., Black, S. R., Bromet, E. J., Carlson, G. A., ... & Klein, D. N. (2016). Neural reactivity to emotional stimuli prospectively predicts the impact of a natural disaster on psychiatric symptoms in children. *Biological Psychiatry*, 80, 381-389. doi:10.1016/j.biopsych.2015.09.008

Kumar, M., & Fonagy, P. (2012). Conceptualizing attachment trauma: Exploring emotional vulnerabilities among disaster affected children of Gujarat. *Psychological Studies*, 57, 9-21. doi:10.1007/s12646-011-0114-x

- Kumar, M., & Fonagy, P. (2013). Differential effects of exposure to social violence and natural disaster on children's mental health. *Journal of traumatic stress, 26*, 695-702. doi:10.1002/jts.21874
- Kuwabara, H., Araki, T., Yamasaki, S., Ando, S., Kano, Y., & Kasai, K. (2015). Regional differences in post-traumatic stress symptoms among children after the 2011 tsunami in Higashi-Matsushima, Japan. *Brain and Development, 37*, 130-136. doi:10.1016/j.braindev.2014.02.003
- La Greca, A. M., Danzi, B. A., & Chan, S. F. (2017). DSM-5 and ICD-11 as competing models of PTSD in preadolescent children exposed to a natural disaster: Assessing validity and co-occurring symptomatology. *European Journal of Psychotraumatology, 8*, 1310591. doi:10.1080/20008198.2017.1310591
- La Greca, A. M., Lai, B. S., Joormann, J., Auslander, B. B., & Short, M. A. (2013). Children's risk and resilience following a natural disaster: Genetic vulnerability, posttraumatic stress, and depression. *Journal of Affective Disorders, 151*, 860-867. doi:10.1016/j.jad.2013.07.024
- La Greca, A. M., Lai, B. S., Llabre, M. M., Silverman, W. K., Vernberg, E. M., & Prinstein, M. J. (2013, August). Children's postdisaster trajectories of PTS symptoms: Predicting chronic distress. *Child & Youth Care Forum, 2*, 351-369. [doi:10.1007/s10566-013-9206-1](https://doi.org/10.1007/s10566-013-9206-1)
- La Greca, A. M., Silverman, W. K., & Wasserstein, S. B. (1998). Children's predisaster functioning as a predictor of posttraumatic stress following Hurricane Andrew. *Journal of consulting and clinical psychology, 66*, 883-892. doi:10.1037//0022-006X.66.6.883
- La Greca, A. M., Silverman, W. K., Lai, B., & Jaccard, J. (2010). Hurricane-related exposure experiences and stressors, other life events, and social support: Concurrent and prospective impact on children's persistent posttraumatic stress symptoms. *Journal of Consulting and Clinical Psychology, 78*, 794. doi.org/10.1037/a0020775.

- La Greca, A. M., Silverman, W. K., Vernberg, E. M., & Prinstein, M. J. (1996). Symptoms of posttraumatic stress in children after Hurricane Andrew: A prospective study. *Journal of Consulting and Clinical Psychology, 64*, 712-723. doi:10.1037/0022-006X.64.4.712
- Lack, C. W., Sullivan, M. A., & Knight, L. A. (2008). Assessing posttraumatic stress in children: A review and further examination of the psychometrics of Frederick's Reaction Index. *Journal of Child & Adolescent Trauma, 1*, 225-232. doi:10.1080/19361520802279141
- Lai, B. S., Beaulieu, B., Ogokeh, C. E., Self-Brown, S., & Kelley, M. L. (2015). Mother and child reports of hurricane related stressors: Data from a sample of families exposed to Hurricane Katrina. *Child & youth Care Forum, 4*, 549-565. [doi:10.1007/s10566-014-9289-3](https://doi.org/10.1007/s10566-014-9289-3)
- Lai, B. S., Kelley, M. L., Harrison, K. M., Thompson, J. E., & Self-Brown, S. (2015). Posttraumatic stress, anxiety, and depression symptoms among children after Hurricane Katrina: A latent profile analysis. *Journal of Child and Family Studies, 24*, 1262-1270. doi:10.1007/s10826-014-9934-3
- Lai, B. S., La Greca, A. M., & Llabre, M. M. (2014). Children's sedentary activity after hurricane exposure. *Psychological Trauma: Theory, Research, Practice, and Policy, 6*, 280-289. doi:10.1037/a0033331
- Lai, B. S., La Greca, A. M., Auslander, B. A., & Short, M. B. (2013). Children's symptoms of posttraumatic stress and depression after a natural disaster: Comorbidity and risk factors. *Journal of Affective Disorders, 146*, 71-78. doi:10.1016/j.jad.2012.08.041
- Lai, B. S., Lewis, R., Livings, M. S., La Greca, A. M., & Esnard, A.-M. (2017). Posttraumatic stress symptom trajectories among children after disaster exposure: A review. *Journal of Traumatic Stress, 30*, 571-582. doi:10.1002/jts.22242

- Lai, B. S., Osborne, M. C., Piscitello, J., Self-Brown, S., & Kelley, M. L. (2018). The relationship between social support and posttraumatic stress symptoms among youth exposed to a natural disaster. *European Journal of Psychotraumatology*, *9*, 1450042. doi:10.1080/20008198.2018.1450042
- Lai, B. S., Tiwari, A., Beaulieu, B. A., Self-Brown, S., & Kelley, M. L. (2015). Hurricane Katrina: Maternal depression trajectories and child outcomes. *Current Psychology*, *34*, 515-523. [doi:10.1007/s12144-015-9338-6](https://doi.org/10.1007/s12144-015-9338-6).
- Laor, N., Wolmer, L., Kora, M., Yucel, D., Spirman, S., & Yazgan, Y. (2002). Posttraumatic, dissociative and grief symptoms in Turkish children exposed to the 1999 earthquakes. *The Journal of Nervous and Mental Disease*, *190*, 824-832. doi:10.1097/01.NMD.0000041959.54021.A7
- Laplante, D. P., Brunet, A., Schmitz, N., Ciampi, A., & King, S. (2008). Project Ice Storm: Prenatal maternal stress affects cognitive and linguistic functioning in 5½-year-old children. *Journal of the American Academy of Child & Adolescent Psychiatry*, *47*, 1063-1072. doi:10.1097/CHI.0b013e31817eec80
- Laplante, D. P., Zelazo, P. R., Brunet, A., & King, S. (2007). Functional play at 2 years of age: Effects of prenatal maternal stress. *Infancy*, *12*, 69-93. doi:10.1111/j.1532-7078.2007.tb00234.x
- Lee, O. (1999). Science knowledge, world views, and information sources in social and cultural contexts: Making sense after a natural disaster. *American Educational Research Journal*, *36*, 187-219. doi:10.3102/00028312036002187
- Li, G., Wang, L., Cao, C., Fang, R., Cao, X., Chen, C., Elhai, J. D., & Hall, B. J. (2019). Posttraumatic stress disorder and executive dysfunction among children and adolescents: A Latent Profile Analysis. *International Journal of Clinical and Health Psychology*, *19*, 228-236. <https://doi.org/10.1016/j.ijchp.2019.07.001>

- Li, X., Huang, X., Tan, H., Liu, A., Zhou, J., & Yang, T. (2010). A study on the relationship between posttraumatic stress disorder in flood victim parents and children in Hunan, China. *Australian and New Zealand Journal of Psychiatry, 44*, 543-550. doi:10.3109/00048671003601400
- Li, Y., Li, H., Decety, J., & Lee, K. (2013). Experiencing a natural disaster alters children's altruistic giving. *Psychological Science, 24*, 1686-1695. doi:10.1177/0956797613479975
- Liang, Y., Cheng, J., Zhou, Y., & Liu, Z. (2019). Trajectories of posttraumatic stress disorders among children after the Wenchuan earthquake: a four-year longitudinal study. *European Journal of Psychotraumatology, 10*, 1586266. doi:10.1080/20008198.2019.1586266
- Liao, T. L., Chen, Y. S., Chen, C. Y., & Chien, L. Y. (2014). Self-reported internalizing and externalizing behaviours among junior high school students at 2 and 4 years after the 921 earthquake in Taiwan. *Stress and Health, 30*, 265-271. doi:10.1002/smi.2506
- Liu, K., Liang, X., Guo, L., Li, Y., Li, X., Xin, B., ... & Li, Y. (2010). Acute stress disorder in the paediatric surgical children and adolescents injured during the Wenchuan earthquake in China. *Stress and Health, 26*, 262-268. doi:10.1002/smi.1288
- Liu, M., Wang, L., Shi, Z., Zhang, Z., Zhang, K., & Shen, J. (2011). Mental health problems among children one-year after Sichuan earthquake in China: A follow-up study. *PloS one, 6*, e14706. doi:10.1371/journal.pone.0014706
- Liu, X., Yang, H., Tang, B., Liu, Y., & Zhang, L. (2017). Health status of adolescents in the Tibetan plateau area of western China: 6 years after the Yushu earthquake. *Health and Quality of Life Outcomes, 15*, 152. doi: 10.1186/s12955-017-0727-4
- Liu, Z., Zhu, Z., Kao, H. S. R., Zong, Y., Tang, S., Xu, M., ... Wang, R. (2014). Effect of calligraphy training on hyperarousal symptoms for childhood survivors of the 2008 China earthquakes. *Neuropsychiatric Disease and Treatment, 10*, 977-985. doi:10.2147/ndt.s55016

- Lochman, J. E., Vernberg, E., Powell, N. P., Boxmeyer, C. L., Jarrett, M., McDonald, K., ... & Kassing, F. (2017). Pre-post tornado effects on aggressive children's psychological and behavioral adjustment through one-year postdisaster. *Journal of Clinical Child & Adolescent Psychology, 46*, 136-149. doi:10.1080/15374416.2016.1228460
- Lonigan, C. J., Shannon, M. P., Finch Jr, A. J., Daugherty, T. K., & Taylor, C. M. (1991). Children's reactions to a natural disaster: Symptom severity and degree of exposure. *Advances in Behaviour Research and Therapy, 13*, 135-154. doi:10.1016/0146-6402(91)90002-R
- Lonigan, C. J., Shannon, M. P., Taylor, C. M., Finch Jr, A. J., & Sallee, F. R. (1994). Children exposed to disaster: II. Risk factors for the development of post-traumatic symptomatology. *Journal of the American Academy of Child & Adolescent Psychiatry, 33*, 94-105. doi:10.1097/00004583-199401000-00013
- Lowe, S. R., Godoy, L., Rhodes, J. E., & Carter, A. S. (2013). Predicting mothers' reports of children's mental health three years after Hurricane Katrina. *Journal of Applied Developmental Psychology, 34*, 17-27. doi:10.1016/j.appdev.2012.09.002
- Ma, X., Liu, X., Hu, X., Qiu, C., Wang, Y., Huang, Y., ... & Li, T. (2011). Risk indicators for post-traumatic stress disorder in adolescents exposed to the 5.12 Wenchuan earthquake in China. *Psychiatry Research, 189*, 385-391. doi:10.1016/j.psychres.2010.12.016
- Madkour, A. S., Johnson, C. C., Clum, G. A., & Brown, L. (2011). Disaster and youth violence: The experience of school-attending youth in New Orleans. *Journal of Adolescent Health, 49*, 213-215. doi:10.1016/j.jadohealth.2011.06.005

- Martin, N. C., Felton, J. W., & Cole, D. A. (2016). Predictors of youths' posttraumatic stress symptoms following a natural disaster: The 2010 Nashville, Tennessee, flood. *Journal of Clinical Child & Adolescent Psychology, 45*, 335-347. doi:10.1080/15374416.2014.982279
- Mashiko, H., Yabe, H., Maeda, M., Itagaki, S., Kunii, Y., Shiga, T., ... & Niwa, S. I. (2017). Mental health status of children after the Great East Japan Earthquake and Fukushima Daiichi nuclear power plant accident. *Asia Pacific Journal of Public Health, 29*, 131-138. doi:10.1177/1010539516675702
- McDermott, B. M., & Cobham, V. E. (2012). Family functioning in the aftermath of a natural disaster. *BMC Psychiatry, 12*, 55. doi:10.1186/1471-244X-12-55
- McDermott, B. M., Cobham, V. E., Berry, H., & Stallman, H. M. (2010). Vulnerability factors for disaster-induced child post-traumatic stress disorder: The case for low family resilience and previous mental illness. *Australian and New Zealand Journal of Psychiatry, 44*, 384-389. doi:10.3109/00048670903489916
- McDermott, B., Berry, H., & Cobham, V. (2012). Social connectedness: A potential aetiological factor in the development of child post-traumatic stress disorder. *Australian & New Zealand Journal of Psychiatry, 46*, 109-117. doi:10.1177/0004867411433950
- McDermott, B., Cobham, V., Berry, H., & Kim, B. (2014). Correlates of persisting posttraumatic symptoms in children and adolescents 18 months after a cyclone disaster. *Australian & New Zealand Journal of Psychiatry, 48*, 80-86. doi:10.1177/0004867413500349
- McDonald, K. L., Vernberg, E. M., Lochman, J. E., Abel, M. R., Jarrett, M. A., Kassing, F., Powell, N., & Qu, L. (2019). Trajectories of tornado-related posttraumatic stress symptoms and pre-exposure predictors in a sample of at-risk youth. *Journal of Consulting and Clinical Psychology, 87*, 1003-1018. <https://doi.org/10.1037/ccp0000432>

- McFarlane, A. C. (1987). The relationship between patterns of family interaction and psychiatric disorder in children. *Australian & New Zealand Journal of Psychiatry*, *21*, 383-390. doi:10.1080/00048678709160935
- McLaughlin, K. A., Fairbank, J. A., Gruber, M. J., Jones, R. T., Osofsky, J. D., Pfefferbaum, B., ... & Kessler, R. C. (2010). Trends in serious emotional disturbance among youths exposed to Hurricane Katrina. *Journal of the American Academy of Child & Adolescent Psychiatry*, *49*, 990-1000. doi.org/10.1016/j.jaac.2010.06.012
- McLaughlin, K. A., Fairbank, J. A., Gruber, M. J., Jones, R. T., Lakoma, M. D., Pfefferbaum, B., ... & Kessler, R. C. (2009). Serious emotional disturbance among youths exposed to Hurricane Katrina 2 years postdisaster. *Journal of the American Academy of Child & Adolescent Psychiatry*, *48*, 1069-1078. doi:10.1097/CHI.0b013e3181b76697
- McLean, M. A., Cobham, V. E., & Simcock, G. (2018). Prenatal Maternal Distress: A Risk Factor for Child Anxiety? *Clinical Child and Family Psychology Review*, *21*, 203-223. doi:10.1007/s10567017-0251-4
- McLean, M. A., Cobham, V. E., Simcock, G., Elbeili, G., Kildea, S., & King, S. (2018). The role of prenatal maternal stress in the development of childhood anxiety symptomatology: The QF2011 Queensland Flood Study. *Development and Psychopathology*, *30*, 995-1007. doi:10.1017/s0954579418000408
- Mercuri, A., & Angelique, H. L. (2004). Children's responses to natural, technological, and na-tech disasters. *Community Mental Health Journal*, *40*, 167-175. doi:10.1023/b:comh.0000022735.38750

- Meyer, A., Danielson, C. K., Danzig, A. P., Bhatia, V., Black, S. R., Bromet, E., ... & Klein, D. N. (2017). Neural biomarker and early temperament predict increased internalizing symptoms after a natural disaster. *Journal of the American Academy of Child & Adolescent Psychiatry*, *56*, 410-416. doi:10.1016/j.jaac.2017.02.005
- Mikolajewski, A. J., & Scheeringa, M. S. (2018). Examining the Prospective Relationship between Pre-Disaster Respiratory Sinus Arrhythmia and Post-Disaster Posttraumatic Stress Disorder Symptoms in Children. *Journal of Abnormal Child Psychology*, *46*, 15351545. doi:10.1007/s10802-017-0396-0
- Mikyung Jang, Se-hwa Lee & Lee-jin Kim (2020) Post-traumatic stress disorder and behavioral problems of parents and children after the 2015 Nepal earthquakes. *International Journal of Mental Health*, *49*, 3-16, DOI: 10.1080/00207411.2020.1725719
- Miller, P. A., Roberts, N. A., Zamora, A. D., Weber, D. J., Burleson, M. H., Robles, E., & Tinsley, B. J. (2012). Families coping with natural disasters: Lessons from wildfires and tornados. *Qualitative Research in Psychology*, *9*, 314-336. doi:10.1080/14780887.2010.500358
- Milne, G. (1977). Cyclone Tracy: II the effects on Darwin children. *Australian Psychologist*, *12*, 55-62. doi:10.1080/00050067708255860
- Mooney, M., Tarrant, R., Paton, D., Johnston, D., & Johal, S. (2020). The school community contributes to how children cope effectively with a disaster. *Pastoral Care in Education*, 1-24. doi:10.1080/02643944.2020.1774632
- Moore, K. W., & Varela, R. E. (2010). Correlates of long-term posttraumatic stress symptoms in children following Hurricane Katrina. *Child Psychiatry & Human Development*, *41*, 239-250. doi:10.1007/s10578-009-0165-6

- Mordeno, I. G., Galela, D. S., Nalipay, M. J. N., & Cue, M. P. (2018). Centrality of Event and Mental Health Outcomes in Child and Adolescent Natural Disaster Survivors. *The Spanish Journal of Psychology*, 21. doi:10.1017/sjp.2018.58
- Moss, K. M., Simcock, G., Cobham, V., Kildea, S., Elgbeili, G., Laplante, D. P., & King, S. (2017). A potential psychological mechanism linking disaster-related prenatal maternal stress with child cognitive and motor development at 16 months: The QF2011 Queensland Flood Study. *Developmental Psychology*, 53, 629-641. doi:10.1037/dev0000272
- Mouchenik, Y., Marty-Chevreuril, A., Marquer, C., Joseph, N. E., Ducasse, J. W., Ryswick, C., ... & Baubet, T. (2014). Indicative evaluation of psychological disturbance amongst young children affected by the January 2010 Haiti earthquake, in Port-au-Prince. *Vulnerable Children and Youth Studies*, 9, 247-257. [doi:10.1080/17450128.2014.901589](https://doi.org/10.1080/17450128.2014.901589)
- Mumper, E. E., Dyson, M. W., Finsaas, M. C., Olino, T. M., & Klein, D. N. (2019). Life stress moderates the effects of preschool behavioral inhibition on anxiety in early adolescence. *Journal of Child Psychology and Psychiatry*, 61, 167-174. doi:10.1111/jcpp.13121
- Muris, P., Meesters, C., Merckelbach, H., Verschuren, M., Geebelen, E., & Aleva, E. (2002). Fear of storms and hurricanes in Antillean and Belgian children. *Behaviour Research and Therapy*, 40, 459-469. doi:10.1016/S0005-7967(01)00058-4
- Murphy, S. A. (2010). Women's and Children's Exposure to Mass Disaster and Terrorist Attacks. *Issues in Mental Health Nursing*, 31, 45-53. doi:10.3109/01612840903200035
- Najarian, L. M., Goenjian, A. K., Pelcovtztz, D., Mandel, F., & Najarian, B. (1996). Relocation after a disaster: Posttraumatic stress disorder in Armenia after the earthquake. *Journal of the American*

Academy of Child & Adolescent Psychiatry, 35, 374-383. doi:10.1097/00004583-199603000-00020

Navarro, J., Pulido, R., Berger, C., Arteaga, M., Osofsky, H. J., Martinez, M., ... & Hansel, T. C. (2016). Children's disaster experiences and psychological symptoms: An international comparison between the Chilean earthquake and tsunami and Hurricane Katrina. *International Social Work*, 59, 545-558. doi:10.1177/0020872814537850

Neuner, F., Schauer, E., Catani, C., Ruf, M., & Elbert, T. (2006). Post-tsunami stress: A study of posttraumatic stress disorder in children living in three severely affected regions in Sri Lanka. *Journal of Traumatic Stress: Official Publication of The International Society for Traumatic Stress Studies*, 19, 339-347. doi:10.1002/jts.20121

Nomura, Y., Davey, K., Pehme, P. M., Finik, J., Glover, V., Zhang, W., ... Ham, J. (2019). Influence of in utero exposure to maternal depression and natural disaster-related stress on infant temperament at 6 months: The children of Superstorm Sandy. *Infant Mental Health Journal*, 40, 204-216. doi:10.1002/imhj.21766

Norris, F. H., Friedman, M. J., Watson, P. J., Byrne, C. M., Diaz, E., & Kaniasty, K. (2002). 60,000 disaster victims speak: Part I. an empirical review of the empirical literature, 1981-2001. *Psychiatry: Interpersonal and Biological Processes*, 65, 207-239. doi:10.1521/psyc.65.3.207.20173

Nygaard, E., Jensen, T. K., & Dyb, G. (2010). Posttraumatic stress reactions in siblings after mutual disaster: Relevance of family factors. *Journal of Traumatic Stress: Official Publication of The International Society for Traumatic Stress Studies*, 23, 278-281. doi:10.1002/jts.20511

- Nygaard, E., Jensen, T. K., & Dyb, G. (2012). Stability of posttraumatic stress reaction factors and their relation to general mental health problems in children: A longitudinal study. *Journal of Clinical Child & Adolescent Psychology, 41*, 15-26. doi:10.1080/15374416.2012.632344
- Ortiz, C. D., Silverman, W. K., Jaccard, J., & La Greca, A. M. (2011). Children's state anxiety in reaction to disaster media cues: A preliminary test of a multivariate model. *Psychological Trauma: Theory, Research, Practice, and Policy, 3*, 157-164. doi:10.1037/a0020098
- Osofsky, H. J., Osofsky, J. D., Kronenberg, M., Brennan, A., & Hansel, T. C. (2009). Posttraumatic stress symptoms in children after Hurricane Katrina: Predicting the need for mental health services. *American Journal of Orthopsychiatry, 79*, 212-220. doi.org/10.1037/a0016179
- Osofsky, J. D., Osofsky, H. J., Weems, C. F., Hansel, T. C., & King, L. S. (2014). Effects of stress related to the gulf oil spill on child and adolescent mental health. *Journal of Pediatric Psychology, 41*, 65-72. doi.org/10.1093/jpepsy/jsu085
- Osofsky, J., Kronenberg, M., Bocknek, E., & Hansel, T. C. (2015, August). Longitudinal impact of attachment-related risk and exposure to trauma among young children after Hurricane Katrina. *Child & Youth Care Forum, 44*, 493-510. doi:10.1007/s10566-015-9300-7
- Pfefferbaum, B., Newman, E., & Nelson, S. D. (2014). Mental health interventions for children exposed to disasters and terrorism. *Journal of Child and Adolescent Psychopharmacology, 24*, 24-31. doi:10.1089/cap.2013.0061
- Pfefferbaum, B., Nitiéma, P., Tucker, P., & Newman, E. (2017). Early child disaster mental health interventions: A review of the empirical evidence. *Child & Youth Care Forum, 46*, 621-642. doi:10.1007/s10566-017-9397-y

- Pfefferbaum, B., Varma, V., Nitiéma, P., & Newman, E. (2014). Universal preventive interventions for children in the context of disasters and terrorism. *Child and Adolescent Psychiatric Clinics of North America*, 23, 363-382. doi:10.1016/j.chc.2013.12.006
- Pfefferbaum, B., Weems, C. F., Scott, B. G., Nitiéma, P., Noffsinger, M. A., Pfefferbaum, R. L., ... Chakraborty, A. (2013). Research methods in child disaster studies: A review of studies generated by the september 11, 2001, terrorist attacks; the 2004 Indian Ocean Tsunami; and Hurricane Katrina. *Child & Youth Care Forum*, 42, 285–337. doi:10.1007/s10566-013-9211-4
- Pina, A. A., Villalta, I. K., Ortiz, C. D., Gottschall, A. C., Costa, N. M., & Weems, C. F. (2008). Social support, discrimination, and coping as predictors of posttraumatic stress reactions in youth survivors of Hurricane Katrina. *Journal of Clinical Child & Adolescent Psychology*, 37, 564-574. doi: 10.1080/15374410802148228
- Pine, D. S., & Cohen, J. A. (2002). Trauma in children and adolescents: Risk and treatment of psychiatric sequelae. *Biological Psychiatry*, 51, 519-531. doi:10.1016/s0006-3223(01)01352-x
- Piotrowski, C., & Dunham, F. Y. (1983). Locus of control orientation and perception of “hurricane” in fifth graders. *The Journal of general psychology*, 109, 119-127. doi:10.1080/00221309.1983.9711518
- Pityaratstian, N., Piyasil, V., Ketumarn, P., Sitdhiraksa, N., Ularntinon, S., & Pariwatcharakul, P. (2014). Randomized controlled trial of Group Cognitive Behavioural Therapy for Post-Traumatic

Stress Disorder in children and adolescents exposed to tsunami in Thailand. *Behavioural and Cognitive Psychotherapy*, 43, 549-561. doi:10.1017/s1352465813001197

Ponnamperuma, T., & Nicolson, N. A. (2016). Negative trauma appraisals and PTSD symptoms in Sri Lankan adolescents. *Journal of abnormal child psychology*, 44, 245-255. doi.org/10.1007/s10802-015-9985-y

Powell, T. M., & Bui, T. (2016). Supporting social and emotional skills after a disaster: Findings from a mixed methods study. *School Mental Health*, 8, 106-119. doi:10.1007/s12310-016-9180-5

Powell, T. M., & Thompson, S. J. (2016). Enhancing coping and supporting protective factors after a disaster. *Research on Social Work Practice*, 26, 539-549. doi:10.1177/1049731514559422

Prinstein, M. J., La Greca, A. M., Vernberg, E. M., & Silverman, W. K. (1996). Children's coping assistance: How parents, teachers, and friends help children cope after a natural disaster. *Journal of Clinical Child Psychology*, 25, 463-475. doi:10.1207/s15374424jccp2504_11

Proctor, L. J., Fauchier, A., Oliver, P. H., Ramos, M. C., Rios, M. A., & Margolin, G. (2007). Family context and young children's responses to earthquake. *Journal of Child Psychology and Psychiatry*, 48, 941-949. doi:10.1111/j.1469-7610.2007.01771.x

Pullins, L. G., McCammon, S. L., Lamson, A. S., Wuensch, K. L., & Mega, L. (2005). School-based post-flood screening and evaluation: Findings and challenges in one community. *Stress, Trauma, and Crisis*, 8, 229-249. doi:10.1080/1543461050 0406343

Pynoos, R. S., Goenjian, A., Tashjian, M., Karakashian, M., Manjikian, R., Manoukian, G., ... & Fairbanks, L. A. (1993). Post-traumatic stress reactions in children after the 1988 Armenian earthquake. *The British Journal of Psychiatry*, 163, 239-247. doi:10.1192/bjp.163.2.239

- Raccanello, D., Burro, R., & Hall, R. (2017). Children's emotional experience two years after an earthquake: An exploration of knowledge of earthquakes and associated emotions. *PLoS one*, *12*, e0189633. doi: [10.1371/journal.pone.0189633](https://doi.org/10.1371/journal.pone.0189633)
- Roberts, Y. H., Mitchell, M. J., Witman, M., & Taffaro, C. (2010). Mental health symptoms in youth affected by Hurricane Katrina. *Professional Psychology: Research and Practice*, *41*, 10-18. doi:10.1037/a0018339
- Rousseau, C., Benoit, M., Lacroix, L., & Gauthier, M.-F. (2009). Evaluation of a sandplay program for preschoolers in a multiethnic neighborhood. *Journal of Child Psychology and Psychiatry*, *50*, 743-750. doi:10.1111/j.1469-7610.2008.02003.x
- Roussos, A., Goenjian, A. K., Steinberg, A. M., Sotiropoulou, C., Kakaki, M., Kabakos, C., ... & Manouras, V. (2005). Posttraumatic stress and depressive reactions among children and adolescents after the 1999 earthquake in Ano Liosia, Greece. *American Journal of Psychiatry*, *162*, 530-537. doi: 10.1176/appi.ajp.162.3.530
- Roysircar, G., Colvin, K. F., Afolayan, A. G., Thompson, A., & Robertson, T. W. (2017). Haitian children's resilience and vulnerability assessed with house-tree-person (HTP) drawings. *Traumatology*, *23*, 68. doi:10.1037/trm0000090
- Rubens, S. L., Felix, E. D., & Hambrick, E. P. (2018). A meta-analysis of the impact of natural disasters on internalizing and externalizing problems in youth. *Journal of Traumatic Stress*, *31*, 332-341. doi:10.1002/jts.22292
- Russell, J. D., Neill, E. L., Carrión, V. G., & Weems, C. F. (2017). The network structure of posttraumatic stress symptoms in children and adolescents exposed to disasters. *Journal of the*

American Academy of Child & Adolescent Psychiatry, 56, 669-677.
doi.org/10.1016/j.jaac.2017.05.021

Russoniello, C. V., Skalko, T. K., O'brien, K., McGhee, S. A., Bingham-Alexander, D., & Beatley, J. (2002). Childhood posttraumatic stress disorder and efforts to cope after Hurricane Floyd. *Behavioral Medicine*, 28, 61-71. doi:10.1080/08964280209596399

Şahin, N. H., Batıgün, A. D., & Yılmaz, B. (2007). Psychological symptoms of Turkish children and adolescents after the 1999 earthquake: Exposure, gender, location, and time duration. *Journal of Traumatic Stress: Official Publication of The International Society for Traumatic Stress Studies*, 20, 335-345. doi.org/10.1002/jts.20217

Sales, J. M., Fivush, R., Parker, J., & Bahrick, L. (2005). Stressing memory: Long-term relations among children's stress, recall and psychological outcome following hurricane Andrew. *Journal of Cognition and Development*, 6, 529-545. doi: 10.1207/s15327647jcd0604_5

Salloum, A., & Lewis, M. L. (2010). An exploratory study of African American parent-child coping strategies post-Hurricane Katrina. *Traumatology*, 16, 31-41. doi:10.1177/1534765609348240

Salloum, A., & Overstreet, S. (2008). Evaluation of individual and group grief and trauma interventions for children post disaster. *Journal of Clinical Child & Adolescent Psychology*, 37, 495-507. doi:10.1080/15374410802148194

Salloum, A., Carter, P., Burch, B., Garfinkel, A., & Overstreet, S. (2011). Impact of exposure to community violence, Hurricane Katrina, and Hurricane Gustav on posttraumatic stress and depressive symptoms among school age children. *Anxiety, Stress, & Coping*, 24, 27-42. doi:10.1080/10615801003703193

Saulnier, D. D., & Brolin, K. (2015). A systematic review of the health effects of prenatal exposure to disaster. *International Journal of Public Health*, 60, 781-787. doi:10.1007/s00038-015-0699-2

- Saylor, C. F., Swenson, C. C., Stokes Reynolds, S., & Taylor, M. (1999). The Pediatric Emotional Distress Scale: A brief screening measure for young children exposed to traumatic events. *Journal of Clinical Child Psychology, 28*, 70-81. doi:10.1207/s15374424jccp2801_6
- Scaramella, L. V., Sohr-Preston, S. L., Callahan, K. L., & Mirabile, S. P. (2008). A test of the Family Stress Model on toddler-aged children's adjustment among Hurricane Katrina impacted and nonimpacted low-income families. *Journal of Clinical Child & Adolescent Psychology, 37*, 530-541. doi:10.1080/15374410802148202
- Scheeringa, M. S. (2015, August). Untangling psychiatric comorbidity in young children who experienced single, repeated, or Hurricane Katrina traumatic events. *Child & Youth Care Forum, 44*, 475-492. doi:10.1007/s10566-014-9293-7
- Scheeringa, M. S., & Zeanah, C. H. (2008). Reconsideration of harm's way: Onsets and comorbidity patterns of disorders in preschool children and their caregivers following Hurricane Katrina. *Journal of Clinical Child & Adolescent Psychology, 37*, 508-518. doi:10.1080/15374410802148178
- Schwind, J. S., Formby, C. B., Santangelo, S. L., Norman, S. A., Brown, R., Hoffman Frances, R., ... Karmacharya, D. (2018). Earthquake exposures and mental health outcomes in children and adolescents from Phulpingdanda village, Nepal: a cross-sectional study. *Child and Adolescent Psychiatry and Mental Health, 12*, 54. doi:10.1186/s13034-018-0257-9
- Self-Brown, S., Lai, B. S., Harbin, S., & Kelley, M. L. (2014). Maternal posttraumatic stress disorder symptom trajectories following Hurricane Katrina: An initial examination of the impact of

maternal trajectories on the well-being of disaster-exposed youth. *International Journal of Public Health*, 59, 957-965. doi:10.1007/s00038-014-0596-0

Shannon, M. P., Lonigan, C. J., Finch Jr, A. J., & Taylor, C. M. (1994). Children exposed to disaster: I. Epidemiology of post-traumatic symptoms and symptom profiles. *Journal of the American Academy of Child & Adolescent Psychiatry*, 33, 80-93. doi:10.1097/00004583-199401000-00012

Shaw, J. A., Applegate, B., & Schorr, C. (1996). Twenty-one-month follow-up study of school-age children exposed to Hurricane Andrew. *Journal of the American Academy of Child & Adolescent Psychiatry*, 35, 359-364. doi:10.1097/00004583-199603000-00018.

Shaw, J. A., Applegate, B., Tanner, S., Perez, D., Rothe, E., Campo-Bowen, A. E., & Lahey, B. L. (1995). Psychological effects of Hurricane Andrew on an elementary school population. *Journal of the American Academy of Child & Adolescent Psychiatry*, 34, 1185-1192. doi:10.1097/00004583-199509000-00016

Shen, Y.-J. (2002). Short-term group play therapy with Chinese earthquake victims: Effects on anxiety, depression and adjustment. *International Journal of Play Therapy*, 11, 43-63. doi:10.1037/h0088856

Silwal, S., Dybdahl, R., Chudal, R., Sourander, A., & Lien, L. (2018). Psychiatric symptoms experienced by adolescents in Nepal following the 2015 earthquakes. *Journal of affective disorders*, 234, 239-246. doi:10.1016/j.jad.2018.03.002

Simcock, G., Cobham, V. E., Laplante, D. P., Elgbeili, G., Gruber, R., Kildea, S., & King, S. (2019). A cross-lagged panel analysis of children's sleep, attention, and mood in a prenatally stressed cohort: The QF2011 Queensland flood study. *Journal of Affective Disorders*, 255, 96-104. doi:10.1016/j.jad.2019.05.041

- Simcock, G., Elgbeili, G., Laplante, D. P., Kildea, S., Cobham, V., Stapleton, H., ... King, S. (2017). The Effects of Prenatal Maternal Stress on Early Temperament. *Journal of Developmental & Behavioral Pediatrics*, 38, 310-321. doi:10.1097/dbp.0000000000000444
- Simcock, G., Laplante, D. P., Elgbeili, G., Kildea, S., & King, S. (2018). A trajectory analysis of childhood motor development following stress in pregnancy: The QF2011 flood study. *Developmental Psychobiology*, 60, 836-848. doi:10.1002/dev.21767
- Siqueland, J., Hafstad, G. S., & Tedeschi, R. G. (2012). Posttraumatic growth in parents after a natural disaster. *Journal of Loss and Trauma*, 17, 536-544. doi:10.1080/15325024.2012.678778
- Siswa Widyatmoko, C., Tan, E. T., Conor Seyle, D., Haksi Mayawati, E., & Cohen Silver, R. (2011). Coping with natural disasters in Yogyakarta, Indonesia: The psychological state of elementary school children as assessed by their teachers. *School Psychology International*, 32, 484-497. [doi:10.1177/0143034311402919](https://doi.org/10.1177/0143034311402919)
- Soysa, C. K. (2013). War and tsunami PTSD responses in Sri Lankan children: Primacy of reexperiencing and arousal compared to avoidance-numbing. *Journal of Aggression, Maltreatment & Trauma*, 22, 896-915. doi:10.1080/10926771.2013.824056
- Spell, A. W., Kelley, M. L., Wang, J., Self-Brown, S., Davidson, K. L., Pellegrin, A., ... & Baumeister, A. (2008). The moderating effects of maternal psychopathology on children's adjustment post-hurricane Katrina. *Journal of Clinical Child & Adolescent Psychology*, 37, 553-563. doi:10.1080/15374410802148210
- Sprung, M. (2008). Unwanted intrusive thoughts and cognitive functioning in kindergarten and young elementary school-age children following Hurricane Katrina. *Journal of Clinical Child & Adolescent Psychology*, 37, 575-587. doi:10.1080/15374410802148236

- Sprung, M., & Harris, P. L. (2010). Intrusive thoughts and young children's knowledge about thinking following a natural disaster. *Journal of Child Psychology and Psychiatry*, *51*, 1115-1124. doi:10.1111/j.14697610.2010.02273.x
- Sriskandarajah, V., Neuner, F., & Catani, C. (2015). Predictors of violence against children in Tamil families in northern Sri Lanka. *Social Science & Medicine*, *146*, 257-265. doi:10.1016/j.socscimed.2015.10.010
- Stoppelbein, L., & Greening, L. (2000). Posttraumatic stress symptoms in parentally bereaved children and adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry*, *39*, 1112-1119. doi:10.1097/00004583-200009000-00010
- Strahm, A. M., Bagne, A. G., Rued, H. A., Larson, K. J., Roemmich, J. N., & Hilmert, C. J. (2020). Prenatal traumatic stress and offspring hair cortisol concentration: A nine year follow up to the Red River flood pregnancy study. *Psychoneuroendocrinology*, *113*, 104579. doi:10.1016/j.psyneuen.2019.104579
- Sullivan, M. A., Saylor, C. F., & Foster, K. Y. (1991). Post-hurricane adjustment of preschoolers and their families. *Advances in Behaviour Research and Therapy*, *13*, 163-171. doi:10.1016/0146-6402(91)90004-T
- Sun, X. Y., Fan, H. M., Bai, B., Song, H. T., Tao, F. Y., Song, Z. X., ... & Zhang, L. Y. (2014). Psychosomatic conditions of the children and adolescents exposed to 5.12 Wenchuan earthquake. *International Journal of Behavioral Medicine*, *21*, 730-735. doi:10.1007/s12529-013-9377-z

- Sun, Y., & Yan, T. (2020). Relationship between household composition and intergenerational post-disaster mental health in two-parent families: Evidence from Japan. *Journal of affective disorders*, 270, 22-29. doi.org/10.1016/j.jad.2020.03.052
- Swenson, C. C., Saylor, C. F., Powell, M. P., Stokes, S. J., Foster, K. Y., & Belter, R. W. (1996). Impact of a natural disaster on preschool children: Adjustment 14 months after a hurricane. *American Journal of Orthopsychiatry*, 66, 122-130. doi:10.1037/h0080162
- Takada, S. (2013). Post-Traumatic Stress Disorders and mental health care (lessons learned from the Hanshin-Awaji Earthquake, Kobe, 1995). *Brain and Development*, 35, 214-219. doi:10.1016/j.braindev.2012.09.013
- Tang, B., Liu, X., Liu, Y., Xue, C., & Zhang, L. (2014). A meta-analysis of risk factors for depression in adults and children after natural disasters. *Bio Med Central Public Health*, 14, 623. doi:10.1186/1471-2458-14-623
- Tang, W., Lu, Y., & Xu, J. (2018). Post-traumatic stress disorder, anxiety and depression symptoms among adolescent earthquake victims: comorbidity and associated sleep-disturbing factors. *Social Psychiatry and Psychiatric Epidemiology*, 53, 1241-125doi:10.1007/s00127-018-1576-0
- Tang, W., Xu, D., Li, B., Lu, Y., & Xu, J. (2018). The relationship between the frequency of suicidal ideation and sleep disturbance factors among adolescent earthquake victims in China. *General Hospital Psychiatry*, 55, 90-97. doi:10.1016/j.genhosppsy.2018.09.013
- Tang, W., Zhao, J., Lu, Y., Yan, T., Wang, L., Zhang, J., & Xu, J. (2017). Mental health problems among children and adolescents experiencing two major earthquakes in remote mountainous regions: a longitudinal study. *Comprehensive Psychiatry*, 72, 66-73. doi:10.1016/j.comppsy.2016.09.004

- Tang, W., Zhao, J., Lu, Y., Zha, Y., Liu, H., Sun, Y., ... & Xu, J. (2018). Suicidality, posttraumatic stress, and depressive reactions after earthquake and maltreatment: a cross-sectional survey of a random sample of 6132 Chinese children and adolescents. *Journal of Affective Disorders*, 232, 363-369. doi:10.1016/j.jad.2018.02.081
- Tao, T., Duan, X., & Shi, J. (2014). Posttraumatic stress symptoms of Chinese rural children and adolescents surviving the 2008 Wenchuan earthquake assessed using CRIES. *Journal of Loss and Trauma*, 19, 1-11. doi:10.1080/15325024.2012.734201
- Tatsuta, N., Nakai, K., Satoh, H., & Murata, K. (2015). Impact of the great east Japan earthquake on child's IQ. *The Journal of Pediatrics*, 167, 745-751. doi:10.1016/j.jpeds.2015.06.033
- Tees, M. T., Harville, E. W., Xiong, X., Buekens, P., Pridjian, G., & Elkind-Hirsch, K. (2010). Hurricane Katrina-related maternal stress, maternal mental health, and early infant temperament. *Maternal and Child Health Journal*, 14, 511-518. [doi:10.1007/s10995-009-0486-x](https://doi.org/10.1007/s10995-009-0486-x)
- Terranova, A. M., Boxer, P., & Morris, A. S. (2009). Factors influencing the course of posttraumatic stress following a natural disaster: Children's reactions to Hurricane Katrina. *Journal of Applied Developmental Psychology*, 30, 344-355. doi:10.1016/j.appdev.2008.12.017
- Terranova, A. M., Morris, A. S., Myers, S., Kithakye, M., & Morris, M. D. (2015). Preschool children's adjustment following a hurricane: Risk and resilience in the face of adversity. *Early Education and Development*, 26, 534-548. doi:10.1080/10409289.2015.994463
- Thienkrua, W., Cardozo, B. L., Chakkraband, M. S., Guadamuz, T. E., Pengjuntr, W., Tantipiwatanaskul, P., ... & Tappero, J. W. (2006). Symptoms of posttraumatic stress disorder and depression among children in tsunami-affected areas in southern Thailand. *Jama*, 296, 549-559. doi:10.1001/jama.296.5.549

- Thomson, J., Seers, K., Frampton, C., Hider, P., & Moor, S. (2016). Sequential population study of the impact of earthquakes on the emotional and behavioural well-being of 4-year-olds in Canterbury, New Zealand. *Journal of Paediatrics and Child Health*, *52*, 18-24. doi:10.1111/jpc.12988
- Tian W, Jia Z, Duan G, Liu W, Pan X, Guo Q, Chen R, Zhang X. (2013). Longitudinal study on health-related quality of life among child and adolescent survivors of the 2008 Sichuan earthquake. *Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care & Rehabilitation*, *22*, 745-752. doi:10.1007/s11136-012-0201-z
- Tolin, D. F., & Foa, E. B. (2006). Sex differences in trauma and posttraumatic stress disorder: A quantitative review of 25 years of research. *Psychological Bulletin*, *132*, 959-992. doi:10.1037/0033-2909.132.6.959
- Udomratn, P. (2009). Prevalence of tsunami-related PTSD and MDD in Thailand. *Asian Journal of Psychiatry*, *2*, 124-127. doi:10.1016/j.ajp.2009.10.008
- Uemoto, M., Asakawa, A., Takamiya, S., Asakawa, K., & Inui, A. (2012). Kobe earthquake and post-traumatic stress in school-aged children. *International Journal of Behavioral Medicine*, *19*, 243-251. doi:10.1007/s12529-011-9184-3
- Usami, M., Iwadare, Y., Kodaira, M., Watanabe, K., Aoki, M., Katsumi, C., ... & Tanaka, H. (2012). Relationships between traumatic symptoms and environmental damage conditions among children 8 months after the 2011 Japan earthquake and tsunami. *PLoS One*, *7*, e50721. doi:10.1371/journal.pone.0050721

- Usami, M., Iwadare, Y., Ushijima, H., Inazaki, K., Tanaka, T., Kodaira, M., ... Saito, K. (2019). Did kindergarteners who experienced the Great East Japan earthquake as infants develop traumatic symptoms? Series of questionnaire-based cross-sectional surveys. *Asian Journal of Psychiatry*, *44*, 38-44. doi:10.1016/j.ajp.2019.07.011
- Usami, M., Iwadare, Y., Watanabe, K., Kodaira, M., Ushijima, H., Tanaka, T., ... & Saito, K. (2014). Decrease in the traumatic symptoms observed in child survivors within three years of the 2011 Japan earthquake and tsunami. *PLoS one*, *9*, e110898. [doi:10.1371/journal.pone.0110898](https://doi.org/10.1371/journal.pone.0110898)
- Valenti, M., Ciprietti, T., Di Egidio, C., Gabrielli, M., Masedu, F., Tomassini, A. R., & Sorge, G. (2012). Adaptive response of children and adolescents with autism to the 2009 earthquake in L'Aquila, Italy. *Journal of Autism and Developmental Disorders*, *42*, 954-960. [doi:10.1007/s10803-011-1323-9](https://doi.org/10.1007/s10803-011-1323-9)
- Vernberg, E. M., La Greca, A. M., Silverman, W. K., & Prinstein, M. J. (1996). Prediction of posttraumatic stress symptoms in children after Hurricane Andrew. *Journal of Abnormal Psychology*, *105*, 237-248. doi:10.1037/0021-843X.105.2.237
- Vezzali, L., Cadamuro, A., Versari, A., Giovannini, D., & Trifiletti, E. (2015). Feeling like a group after a natural disaster: Common ingroup identity and relations with outgroup victims among majority and minority young children. *British Journal of Social Psychology*, *54*, 519-538. doi:10.1111/bjso.12091
- Vezzali, L., Drury, J., Versari, A., & Cadamuro, A. (2016). Sharing distress increases helping and contact intentions via social identification and inclusion of the other in the self: Children's prosocial behaviour after an earthquake. *Group Processes & Intergroup Relations*, *19*, 314-327. doi:10.1177/1368430215590492

- Vigil, J. M., Geary, D. C., Granger, D. A., & Flinn, M. V. (2010). Sex differences in salivary cortisol, alpha-amylase, and psychological functioning following Hurricane Katrina. *Child Development, 81*, 1228-1240. doi:10.1111/j.1467-8624.2010.01464.x
- Vijayakumar, L., Kannan, G. K., & Daniel, S. J. (2006). Mental health status in children exposed to tsunami. *International Review of Psychiatry, 18*, 507-513. doi:10.1080/09540260601037581.
- Vijayakumar, L., Kannan, G. K., Ganesh Kumar, B., & Devarajan, P. (2006). Do all children need intervention after exposure to tsunami? *International Review of Psychiatry, 18*, 515-522. doi:10.1080/09540260601039876
- Vogel, J. M., & Vernberg, E. M. (1993). Part 1: Children's psychological responses to disasters. *Journal of Clinical Child Psychology, 22*, 464-484. doi:10.1207/s15374424jccp2204_7
- Wang, C.-W., Chan, C. L. W., & Ho, R. T. H. (2013). Prevalence and trajectory of psychopathology among child and adolescent survivors of disasters: A systematic review of epidemiological studies across 1987-2011. *Social Psychiatry and Psychiatric Epidemiology, 48*, 1697-1720. doi:10.1007/s00127-013-0731-x
- Wang, M., Armour, C., Li, X., Dai, X., Zhu, X., & Yao, S. (2013). The factorial invariance across gender of three well-supported models: Further evidence for a five-factor model of posttraumatic stress disorder. *The Journal of Nervous and Mental Disease, 201*, 145-152. doi:10.1097/NMD.0b013e31827f627d.
- Wang, W., Fu, W., Wu, J., Ma, X. C., Sun, X. L., Huang, Y., ... & Gao, C. G. (2012). Prevalence of PTSD and depression among junior middle school students in a rural town far from the epicenter of the Wenchuan earthquake in China. *PLoS One, 7*, e41665. doi:10.1371/journal.pone.0041665

- Ward, M. E., Shelley, K., Kaase, K., & Pane, J. F. (2008). Hurricane Katrina: A longitudinal study of the achievement and behavior of displaced students. *Journal of Education for Students Placed at Risk, 13*(2-3), 297-317. doi:10.1080/10824660802350391
- Wasserstein, S. B., & La Greca, A. M. (1998). Hurricane Andrew: Parent conflict as a moderator of children's adjustment. *Hispanic Journal of Behavioral Sciences, 20*, 212-224. doi:10.1177/07399863980202005
- Weems, C. F., Pina, A. A., Costa, N. M., Watts, S. E., Taylor, L. K., & Cannon, M. F. (2007). Predisaster trait anxiety and negative affect predict posttraumatic stress in youths after Hurricane Katrina. *Journal of Consulting and Clinical Psychology, 75*, 154-159. doi:10.1037/0022-006X.75.1.154
- Weems, C. F., Russell, J. D., Graham, R. A., Neill, E. L., & Banks, D. M. (2014). Developmental differences in the linkages between anxiety control beliefs and posttraumatic stress in youth. *Depression and Anxiety, 32*, 356-363. doi:10.1002/da.22319
- Weems, C. F., Scott, B. G., Banks, D. M., & Graham, R. A. (2012). Is TV traumatic for all youths? The role of preexisting posttraumatic-stress symptoms in the link between disaster coverage and stress. *Psychological Science, 23*, 1293-1297. [doi:10.1177/09567976124446952](https://doi.org/10.1177/09567976124446952)
- Weems, C. F., Scott, B. G., Taylor, L. K., Cannon, M. F., Romano, D. M., & Perry, A. M. (2013). A theoretical model of continuity in anxiety and links to academic achievement in disaster-exposed school children. *Development and Psychopathology, 25*, 729-737. doi:10.1017/S0954579413000138

- Weems, C. F., Taylor, L. K., Cannon, M. F., Marino, R. C., Romano, D. M., Scott, B. G., ... & Triplett, V. (2010). Post traumatic stress, context, and the lingering effects of the Hurricane Katrina disaster among ethnic minority youth. *Journal of Abnormal Child Psychology*, *38*, 49-56. [doi:10.1007/s10802-009-9352-y](https://doi.org/10.1007/s10802-009-9352-y)
- Wolmer, L., Laor, N., Dedeoglu, C., Siev, J., & Yazgan, Y. (2005). Teacher-mediated intervention after disaster: A controlled three-year follow-up of children's functioning. *Journal of Child Psychology and Psychiatry*, *46*, 1161-1168. doi:10.1111/j.1469-7610.2005.00416.x
- Xie, Y., Wu, J., & Shen, G. (2019). Posttraumatic Growth in Tibetan Adolescent Survivors 6 Years After the 2010 Yushu Earthquake: Depression and PTSD as Predictors. *Child Psychiatry & Human Development*, *51*, 94-103doi:10.1007/s10578-019-00913-5
- Xu, J., Xie, L., Li, B., Li, N., & Yang, Y. (2012). Anxiety symptoms among children after the Wenchuan earthquake in China. *Nordic Journal of Psychiatry*, *66*, 349-354. doi:10.3109/08039488.2011.650197
- Yagi, J., Fujiwara, T., Yambe, T., Okuyama, M., Kawachi, I., & Sakai, A. (2016). Does social capital reduce child behavior problems? Results from the Great East Japan Earthquake follow-up for Children Study. *Social Psychiatry and Psychiatric Epidemiology*, *51*, 1117-1123. [doi:10.1007/s00127-016-1227-2](https://doi.org/10.1007/s00127-016-1227-2)
- Yang, R., Xiang, Y. T., Shuai, L., Qian, Y., Lai, K. Y., Ungvari, G. S., ... & Wang, Y. F. (2014). Executive function in children and adolescents with posttraumatic stress disorder 4 and 12 months after the Sichuan earthquake in China. *Journal of Child Psychology and Psychiatry*, *55*, 31-38. doi:10.1111/jcpp.12089

- Yeung, N. C., Lau, J. T., Yu, N. X., Zhang, J., Xu, Z., Choi, K. C., ... & Lui, W. W. (2016). Media exposure related to the 2008 Sichuan Earthquake predicted probable PTSD among Chinese adolescents in Kunming, China: A longitudinal study, *Journal of Psychological Trauma, 2*, 253-262. doi:10.1037/tra0000121
- Ying, L. H., Wu, X. C., & Chen, C. (2013). Prevalence and predictors of posttraumatic stress disorder and depressive symptoms among child survivors 1 year following the Wenchuan earthquake in China. *European Child & Adolescent Psychiatry, 22*, 567-575. doi:10.1007/s00787-013-0400-3
- Ying, L., Wu, X., Lin, C., & Jiang, L. (2014). Traumatic severity and trait resilience as predictors of posttraumatic stress disorder and depressive symptoms among adolescent survivors of the Wenchuan earthquake. *PLoS One, 9*, e89401. doi:10.1371/journal.pone.0089401
- Yorbik, O., Akbiyik, D. I., Kirmizigul, P., & Söhmen, T. (2004). Post-traumatic stress disorder symptoms in children after the 1999 Marmara earthquake in Turkey. *International Journal of Mental Health, 33*, 46-58. doi:10.1080/00207411.2004.11043360
- Yoshida, H., Kobayashi, N., Honda, N., Matsuoka, H., Yamaguchi, T., Homma, H., & Tomita, H. (2016). Post-traumatic growth of children affected by the Great East Japan Earthquake and their attitudes to memorial services and media coverage. *Psychiatry and Clinical Neurosciences, 70*, 193-201. doi:10.1111/pcn.12379
- Zhang, J., Zhu, S., Du, C., & Zhang, Y. (2015). Posttraumatic stress disorder and somatic symptoms among child and adolescent survivors following the Lushan earthquake in China: A six-month longitudinal study. *Journal of Psychosomatic Research, 79*, 100-106. doi:10.1016/j.jpsychores.2015.06.001
- Zhang, W., Rajendran, K., Ham, J., Finik, J., Buthmann, J., Davey, K., ... & Nomura, Y. (2018). Prenatal exposure to disaster-related traumatic stress and developmental trajectories of

temperament in early childhood: Superstorm Sandy pregnancy study. *Journal of Affective Disorders*, 234, 335-345. doi:10.1016/j.jad.2018.02.067

Zhang, X., Liu, M., Zhu, M., Shi, J., & Cheng, L. (2010). Personality predictors of posttraumatic stress disorder in orphaned survivors of the Sichuan earthquake. *Social Behavior and Personality: An International Journal*, 38, 1057-1060. doi:10.2224/sbp.2010.38.8.1057

Zhang, Y., Kong, F., Wang, L., Chen, H., Gao, X., Tan, X., ... & Liu, Y. (2010). Mental health and coping styles of children and adolescent survivors one year after the 2008 Chinese earthquake. *Children and Youth Services Review*, 32, 1403-1409. doi:10.1016/j.chilyouth.2010.06.009

Zhang, Y., Zhang, J., Zhu, S., Du, C., & Zhang, W. (2015). Prevalence and predictors of somatic symptoms among child and adolescents with probable posttraumatic stress disorder: A cross-sectional study conducted in 21 primary and secondary schools after an earthquake. *PloS one*, 10, e0137101. doi:10.1371/journal.pone.0137101

Zhou, P., Zhang, Y., Wei, C., Liu, Z., & Hannak, W. (2016). Acute stress disorder as a predictor of posttraumatic stress: A longitudinal study of Chinese children exposed to the Lushan earthquake. *PsyCh Journal*, 5, 206-214. doi:10.1002/pchj.136

Zhou, X., & Wu, X. (2016). The relationship between rumination, posttraumatic stress disorder, and posttraumatic growth among Chinese adolescents after earthquake: A longitudinal study. *Journal of Affective Disorders*, 193, 242-248. doi:10.1016/j.jad.2015.12.076

Zhou, X., Wu, X., & Zhen, R. (2017). Understanding the relationship between social support and posttraumatic stress disorder/posttraumatic growth among adolescents after Ya'an earthquake: The role of emotion regulation. *Psychological Trauma: Theory, Research, Practice, and Policy*, 9, 214-221. [doi:10.1037/tra0000213](https://doi.org/10.1037/tra0000213)

- Zhou, X., Wu, X., & Zhen, R. (2018). Patterns of Posttraumatic Stress Disorder and Posttraumatic Growth Among Adolescents After the Wenchuan Earthquake in China: A Latent Profile Analysis. *Journal of Traumatic Stress, 31*, 57-63. doi:10.1002/jts.22246
- Zhou, X., Wu, X., Wang, W., & Tian, Y. (2017). Longitudinal linkages between social support, posttraumatic stress disorder, and posttraumatic growth among primary school students after the Ya'an earthquake. *Acta Psychologica Sinica, 49*, 1428-1438. doi:10.3724/SP.J.1041.2017.01428
- Zhou, X., Wu, X., Zhen, R., Wang, W., & Tian, Y. (2018). Trajectories of posttraumatic stress disorders among adolescents in the area worst-hit by the Wenchuan earthquake. *Journal of Affective Disorders, 235*, 303-307. doi:10.1016/j.jad.2018.04.032.
- Zhou, X., Zhen, R., & Wu, X. (2017). Posttraumatic stress disorder symptom severity and control beliefs as the predictors of academic burnout amongst adolescents following the Wenchuan Earthquake. *European Journal of Psychotraumatology, 8*, 1412227. doi:10.1080/20008198.2017.1412227