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Adolescent girls' representations of the role of schools and teachers post-disaster: "*second parents, second homes*"

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ABSTRACT

Disasters can result in poor psychosocial outcomes for adolescents. One pathway to mitigate these risks and foster resilience is via schools, where teachers can offer students support. However, existing research lacks consideration of the role schools and teachers play from the perspective of students, particularly those from marginalized populations. Therefore, this study examines adolescents' representations of the role of schools and teachers after a major disaster in Indonesia using a free association interview technique. Thematic analysis of adolescents' interviews ($N = 46$) yielded two salient themes: 'the school as a place of recovery' and 'the school as a place of risk'. While the school and teachers were conceptualized positively in that they promoted students' recovery, students also identified aspects of the post-disaster school environment that produced uncertainty, loss and discomfort thereby heightening their sense of risk. The paper concludes with recommendations for resilience-building, such as ensuring teachers receive relevant training.

Introduction

Adolescents are one of the most vulnerable groups after disasters (Norris et al., 2002; Peek, 2008). They have an increased risk of experiencing psychological challenges associated with trauma, grief and loss, including post-traumatic stress disorder (PTSD) and depression (Bonanno et al., 2010; Norris et al., 2002). These vulnerabilities are exacerbated for teenage girls (Green et al., 1991; McKinzie & Clay-Warner, 2021; Seddighi & Salmani, 2019). Nevertheless, a wealth of empirical research has demonstrated that, over time, most young people make a remarkable recovery considering the adversity encountered (Bonanno et al., 2010; Hechanova & Waelde, 2017; La Greca et al., 2013). This finding has led to an increased focus on strengths-based research to investigate factors that contribute to young peoples' resilience, a research area that has risen in tandem with the increasing intensity of disasters (Masten, 2021; Masten et al., 2015; Paton & Johnston, 2017). We define resilience as the capacity to adapt positively to adversity, which depends on the functioning of dynamic systems at different levels (e.g. family, school and wider community) (Masten, 2001, 2019). Therefore, resilience is not an intrinsic characteristic of certain invulnerable adolescents (Roisman et al., 2002).

Instead, a range of risk and protective factors, such as close relationships, increase or buffer the negative mental health effects of exposure to a stressor.

The role of the school post-disaster

The school system plays a crucial role in the resilience of adolescents (Masten, 2013). Immediately after a disaster, the school may be repurposed as a hub of community recovery, to provide relief such as food, medicine and psychological resources; it can operate as an evacuation location (Lai et al., 2016; Matsuura & Shaw, 2015; Mutch, 2015; Robinson et al., 2014). Upon reopening, besides providing educational continuity, schools are often used as sites of psychological support for students' mental health, coping and wellbeing (Lai et al., 2019; Masten & Narayan, 2012; Masten et al., 2015; Robinson et al., 2014). This change in the function of the school may alter how it is conceptualized in the minds of the community. For example, schools may become symbols of community recovery (Pacheco et al., 2022), survival and a return to normalcy after major disruption (Masten & Obradovic, 2008). In a literature review, Mutch (2014) concludes that schools can operate as the 'glue' that holds the community together. For example, after the Christchurch earthquake, schools provided a stable environment where teacher and peer support were central to enabling students to cope (Mooney et al., 2021; Mutch, 2015). Taken together, these studies demonstrate the capacity of schools to bolster students' resilience post-disaster.

However, while there is a vast interdisciplinary literature on the role of schools for disaster preparedness and risk reduction, fewer works have focused on the role of the school in supporting students' psychosocial needs post-disaster, particularly in the long-term recovery phase (Mutch, 2014, 2018). Empirical work in this area often clusters around major disasters in high-income countries (e.g. Christchurch earthquake in New Zealand, Hurricane Katrina in the US). As a result, there is a paucity of research investigating the significance of schools for students' resilience after disasters in low-and-middle income countries (LMICs). Schools in LMICs may struggle to maintain systems after disasters, as they may be less equipped with psychosocial and economic resources. Despite this, schools may be an even greater asset for students' recovery in LMICs, which have fewer state-provided mental health resources and a lack of finance to access private resources (Seyle et al., 2013).

The role of teachers post-disaster

As one of the most trusted non-familial adults in young people's lives (de Berry et al., 2003), teachers play a multifaceted role in supporting students through adversity. Teachers are in a unique position to offer psychosocial support to students (Le Brocque et al., 2017) across contexts, including in Indonesia (Seyle et al., 2013). As teachers know students personally, they can provide a holistic assessment of students' needs, recognize deviations from normal behaviour and identify students who require additional support (Widyatmoko et al., 2011; Wolmer et al., 2011). Teachers can also assist coping, by listening to students' concerns and offering advice (Mooney et al., 2021; Prinstein et al., 1996). However, due to a lack of sufficient training and/or fear of exacerbating students' distress, teachers may struggle to support students emotionally (Johnson & Ronan, 2014). The perspectives of students regarding the role teachers play after disasters and the impact this has on their resilience remains underexplored in the current literature and will form the focus of this paper.

Theoretical framework

We draw on two complimentary theories to underpin the present study: social representations theory (SRT) and place attachment theory (see Pacheco et al., 2022 for a synthesized framework).

SRT focuses on the widely held ideas or beliefs about novel phenomena that are shaped by interactions between individuals, groups and the socio-cultural context (Howarth, 2006; Marková,

2003; Moscovici, 1973). As disasters can substantially alter schools, the post-disaster school is a new entity for the students who return to it. When presented with a new phenomenon, the processes of anchoring and objectification enable its incorporation into existing meaning systems (Joffe, 2003) and common-sense thinking (Höijer, 2011). Anchoring involves the assimilation of the phenomenon into familiar, pre-existing social representations of similar known issues and objectification involves the concretization of abstract phenomena into tangible symbols, metaphors and images that are already familiar to the group (Moscovici, 1984). Thus, the concept of a social representation enables examination of how the post-disaster school is conceptualized by its students. In keeping with Hajir et al. (2022) recommendation to elevate less heard perspectives and lived experiences of what resilience means, SRT is a relevant framework for this study, as it has been applied to '*give voice*' to socially disenfranchised groups (Zadeh, 2017), by allowing people to express their own subjectivity.

Social representations are structured by 'themata'; themata are the implicit 'dialogical antimonies' (Marková, 2003) that shape common-sense thinking (Smith & Joffe, 2013). Themata are dyadic, interdependent opposites, based on the tendency of humans to think in oppositions or antinomies (Marková, 2003). Since cultural values shape social representations (Duveen, 2007; Moscovici & Marková, 1998), examining themata elucidates how a given cultural group makes sense of social phenomena (Duveen, 2007). Therefore, in the present study, SRT offers a useful approach to reveal the deep-laid ways in which the role of schools and teachers are conceptualized in disaster settings; they enable exploration of the culture-specific, implicit logic of students' conceptualizations of their schools and teachers post-disaster.

Place attachment theory is also drawn on as schools are meaningful psychophysical spaces. Place attachment has been defined in a plethora of ways, reflecting the growing interest in the concept and its theoretical development (Scannell & Gifford, 2010). Definitions generally converge on the construct involving bonding with a meaningful place, in a way that encompasses an interplay of thoughts, feelings and behaviours (Low & Altman, 1992; Scannell & Gifford, 2010). Seminal work on the phenomenology of place emphasizes the emotive component of place attachment, arguing that the affective tie one has with a place fulfils fundamental human needs (Relph, 1976). Sub-concepts of place attachment (e.g. place identity and place dependence) also encompass emotional bonds, belonging, affiliation, commitment and satisfaction in relation to a place (Pretty et al., 2003). Students are expected to have fostered significant place bonds with their schools since they have spent a lot of time over a crucial developmental period in school (Pacheco et al., 2022).

Theories of place are relevant to understanding psychological processes in disaster settings. For example, place attachment theory can shed light on why some individuals or groups may wish to stay in a dangerous place (Hay, 1998) and on how representations of one's environment can foster feelings of safety despite threat, such as in war zones (Billig, 2006). Place attachment theory also allows researchers to make sense of the feelings of distress and grief felt by displaced populations (e. g. Fried, 2000; Fullilove, 1996). Therefore, place theory is well-suited to exploring the role played by the school in supporting or hindering students' resilience post-disaster.

Summary and current study

There is a growing body of literature on the role schools play in alleviating trauma and fostering resilience after disasters (Mutch, 2014; Pacheco et al., 2022). Our recent conceptual analysis (Pacheco et al., 2022) elucidates how and why schools may exist as meaningful places for children and their communities in disaster settings. However, we highlighted a dearth of empirical research that considers the role played by schools and teachers in supporting or hindering a resilient recovery post-disaster from the perspective of students, an absence that is particularly notable in LMICs.

To our knowledge, research in this area has not investigated the role played by teachers and schools post-disaster using place attachment or SRT. This novel approach will provide a complimentary lens to consider how features of the school's socio-physical environment may foster or hinder post-disaster resilience from the perspective of young people. By capturing students' subjective

perspectives three years after an initial disaster, we aim to provide deeper insight into students' long-term recovery processes in a region chronically vulnerable to seismic hazards.

The present study aims to address gaps in the current literature concerning the role of schools and teachers in post-disaster contexts. It asks:

(1) How do adolescents represent the role of schools and teachers after the 2018 Indonesian earthquake/tsunami/landslide disaster?
(2) In what ways do these representations foster or hinder students' resilience post-disaster?

Method

Research context

The Central Sulawesi region of Indonesia was impacted by a disaster on 28th September 2018 and a range of aftershocks. The disaster began with a powerful earthquake measuring 7.7 Mw that caused a tsunami and triggered liquefaction and landslides. It was devasting: 4340 people died, 211,000 people were displaced from their homes, 374 schools sustained major damage (Pemerintah Provinsi Sulawesi Tengah, 2019). Exacerbated by the COVID-19 pandemic, the reconstruction phase is ongoing.

Participants

Three mixed gender school sites were selected due to their exposure to different aspects of the disaster: School A to liquefaction, School B earthquake and School C tsunami. School A and B experienced structural damage, while School C incurred severe damage from flooding and sediment deposition. Each school was closed for several weeks before reopening in relief tents.[1] Due to the well-documented risk factors that make girls particularly vulnerable in disaster settings (Garfias Royo et al., 2022; Tearne et al., 2021), 46 female students aged 14–16 were randomly selected, contacted by their school and invited to participate.[2] The majority of the sample can be described as low income; 95% of the sample reported a monthly household income of less than Indonesia's average wage (Wage Centre, 2023).[3]

Procedure

Informed consent was sought from the schools, participating students and their parents. Interviews were conducted at the school sites between January-February 2022 by three Indonesian researchers online via Zoom.[4] A research assistant was present in person to provide use of an iPad and to offer technical and emotional support. This allowed for the benefits of online interviewing, such as flexible schedules for the researchers, while mitigating some of the disadvantages, such as technological elitism (see Keen et al., 2022). Prior to conducting the interviews, all researchers participated in training led by the Principal Investigator (PI), who devised the method (Joffe & Elsey, 2014). Additionally, each researcher received feedback on at least one pilot interview from the PI, regarding their adherence to the method. This study was approved by the University College London research ethics committee (Project ID 280,898).

Data collection

The Grid Elaboration Method (GEM) was used to explore the perspectives and experiences of young people in-depth. The GEM is a free association technique that aims to reveal people's subjective thoughts and feelings regarding a given social issue. An initial free association task is followed by an

Figure 1. A completed grid.

interview that aims to minimize researcher interference to elicit stored, naturalistic responses (Joffe & Elsey, 2014).

For the free association task, participants were given a sheet of A4 paper containing a grid of four boxes and a prompt that asked: '*please write or draw your first thoughts and feelings regarding the role of teachers and schools in responding to the 2018 earthquake.*' Materials were translated into Bahasa Indonesian and interviews were conducted by Indonesian researchers. The prompt was reviewed for clarity and coherence in translation by local researchers, before being piloted with four students from the same community. Participants were instructed to give one idea per box and were reassured that there was no right or wrong answer. Figure 1 shows a completed grid. Next, in an interview, students were asked to elaborate on each box in turn and probed by researchers. Finally, a survey of demographic items and psychometric scales (reported elsewhere) were completed.

Data analysis

Interview audio files were transcribed verbatim and translated into English. A thematic analysis (TA) was conducted on the interview data (Joffe, 2011; Joffe & Yardley, 2004) using the qualitative analytic software Atlas ti. TA is a method for identifying and analysing patterns of meaning (themes) prevalent in the dataset (Joffe & Yardley, 2004) To conduct the analysis, we read the data set thoroughly before inductively devising a coding frame. An inductive approach was considered appropriate to prioritize students' voices and to explore unanticipated findings. We followed the recommendation of Barker and Pistrang (2005) to test the reliability of the coding frame. The first and second author independently double coded three interviews finding 83% agreement, which is

sufficient reliability (O'Connor & Joffe, 2020). Discrepancies were discussed and the coding frame was finalized before the full data set was coded; the coding process involved assigning labels (codes) from the coding frame to the data. Patterns in the data were then reviewed and the codes were clustered into themes relevant to answering the research questions. Thematic networks were created to visually present the connections between codes and how they constitute a theme.

Results

Two major antithetical, themes were evident in the data: the school as a place of *recovery* and the school as a place of *risk* (see Table 1). Most students represented their school *simultaneously* as a place of recovery and a place of risk (85%), while the content of a minority of students' elaborations clustered around the school as solely a place of recovery (11%) and even fewer discussed the school only as a place of risk (4%). Generally, students' elaborations were similar across the three sites, but notable differences are discussed.

Theme 1. The school as a place of recovery

Nearly all students represented the school as a place of recovery, which was associated with positive emotional experiences. For most students this was due to in-school access to social support and, for just over half of students, attributed to school-based recovery activities.

Theme 1.1. The school as a social place

The school was represented as a hub of beneficial relationships by nearly all students (see Figure 2 for a thematic network). The most salient relationships embedded in the school were friendships. Secondly, over half of students mentioned the role of teachers in providing social-emotional support, distributing aid and imparting disaster risk reduction advice. Around a quarter of students mentioned volunteers, who mainly provided instrumental support (e.g. delivering aid) and facilitated recovery activities. These relationships were associated with positive emotional experiences.

The school environment was conceptualized by students as resilience-promoting due to facilitating reunions with friends. Interactions often centred around engagement in enjoyable activities to distract students from rumination. Students spoke about play enabling them '*to avoid the trauma*' and time with friends fostered positive emotional experiences, such as joy and laughter.

> We played with friends and laughed, so we didn't remember the disaster. (Student 14, School A)

Play supported students' emotional regulation and was often mentioned alongside other calming activities, such as prayer.

Table 1. Frequency of themes.

| The school as a place of recovery (96%) Consists of:	The school as a place of risk (89%) Consists of:
The school as a social place (91%): • Role of friends • Teachers supporting students • Volunteers and NGOs • Donations and Aid	**The school as a place of physical risk (59%):** • Physical environmental damage • Temporary school
The school as a site for recovery activities (54%): • Disaster recovery activities • Trauma healing	**The school as a place of social disruption (43%):** • Loss of life and community members • Inactive teacher
Above are associated with **positive emotional experiences (63%)**	**The school as a place of routine disruption (39%):** • School challenges • Change in rules and routine
	Above are associated with **negative emotional experiences (70%)**
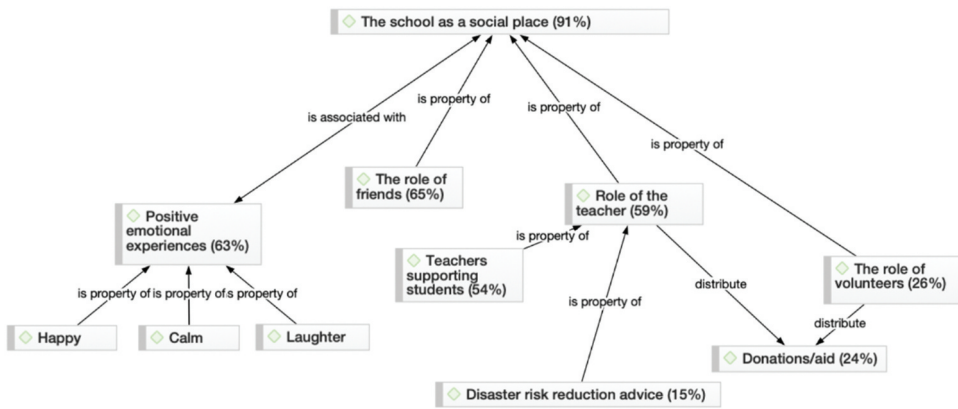
Figure 2. The school as a social place.
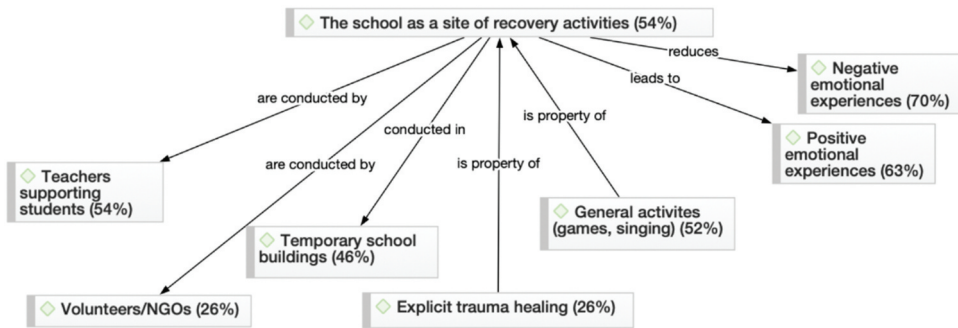
Figure 3. The school as a site of recovery activities.

> A bit calmer because we played with friends or prayed, so it was a little calmer, was not too afraid anymore. (Student 40, School A)

Some students discussed the role of friends in supporting coping with disaster-related stressors, as they provided relief from post-disaster challenges, including displacement. In contrast to their unexpected and unfamiliar living situation, the school provided a well-known environment for students to reunite with friends, supporting a resumed sense of normalcy.

> So it was important, because when I was at home, I was only in temporary shelter. Because of the earthquake. So it's good to go to school, met all friends, played together, went home together. (Student 3, School B)

For many students, friendships provided an opportunity for young people to reciprocally share stories of their disaster experience. Often this supported their processing of the situation, which they associated with a reduction in negative affect, such as happiness replacing fear. Sharing stories was facilitated by the disaster being a community wide event; as the experience was collective, students benefitted from reciprocally exchanging stories that promoted feelings of solidarity.

> Happy, just happy … Everything was fine, when I was with friends … It's [the impact of the earthquake] gone, because I was sharing the story with friends who experienced it too. (Student 6, School B)

However, for some students, the positive emotional experiences elicited by spending time with friends was accompanied by feelings of sadness related to the aftermath of the disaster.

> There was sadness and joy. Sad about what happened. Happy to meet the teachers, meet friends, and ask about their situation. (Student 7, School B)

Contrasting with the mutuality of exchanging stories among friends who had a shared disaster experience, a minority of students who had been displaced by the disaster and relocated to new schools mentioned feeling disconnected from peers who had not experienced the disaster. Therefore, while the *familiar* school is represented as a place of recovery, this representation may be a feature of one's *own* school rather than all schools. This was exemplified by a participant who described returning to their original school as returning to old, familiar friendships, which contrasted with the unfamiliar, uncomfortable environment of their new school.

> Nice, but I didn't feel comfortable [in the new school], I was not used to their environment.... [When they returned] Went straight to school, immediately met old friends. (Student 39, School A)

Teachers were represented as a reliable, trusted source of support by most students. Only occasional reference was made to teachers' academic role, implying that their primary responsibility was to prioritize students' social and emotional needs. To illustrate this, some students spoke about the role of the teacher supporting emotional regulation in the classroom.

> The teacher calmed them down first, then when they calmed down, they came to learn with us. (Student 19, School B)

The student-teacher relationship was represented as resilience promoting; students equated their relationship with teachers to those with family members.

> … because they were at school as a substitute for parents. (Student 42, School C)

The student-teacher relationship helped students to feel comfortable to share their disaster experiences, which students considered to be imperative for resilience-building. Some students expressed that story sharing was reciprocal as they '*told stories to strengthen each other*' while '*mutually reinforcing each other*'. Specific significance was attributed to homeroom and religious teachers.

> Very meaningful. Teachers are like second parents, second homes. With my homeroom teacher, I could talk about my situation at home, what I felt during the earthquake. I was happy because I could share experiences with my teacher. (Student 21, School B)

After listening to students' '*stories*', teachers provided advice that re-directed students to activities that could distract them from the disaster, such as play or prayer. Students appreciated this advice as they reported that they '*remembered their kindness*', felt '*calmer*' and '*not too afraid anymore*'.

Other students articulated that although teachers did not actively facilitate activities to support their recovery, the grounding presence of teachers checking on them was sufficient for them to feel safe at school. Awareness of the trusted teachers gaze replaced worries and fears with feelings of increased safety in the post-disaster environment.

> When it comes to worries and fear, it didn't seem like it was too much because there were a lot of teachers who checked on the students playing. (Student 31, School A)

Students also represented teachers as trusted sources of disaster risk reduction advice. Some students mentioned examples of specific recommendations to: '*avoid trees*', '*go under the table*', '*don't get too close to a standing wall*', '*stay in the shelters*', '*run and find the door to exit*' and '*avoid tall buildings*'. Students also spoke of vague advice given to '*be more careful*' and '*always be alert*'.

Some students represented teachers as a source of instrumental social support due to their role in distributing aid. The items distributed were valued by students materially, but were also presented as imbued with symbolic significance, as they were anchored to the representation of a 'normal', functioning school. For example, one student explained that the school gifted '*pen, book, pencil eraser*' and replaced '*the broken books package, chairs and table*', which led them to feel '*happy*' (Student 1, School B).

Contrasting with the familiarity of friends and teachers, volunteers were described as '*from abroad*'. They were spoken about in a more impersonal manner. For example, some teachers were referred to by name, whereas volunteers were referred to as '*volunteers*' or '*people*'. Despite volunteers coming from outside students' community, stories were exchanged with volunteers to foster connection and trust. Rather than centring around their shared disaster experience, as with other students and teachers, the stories related to life experiences and the role of the volunteers. Students associated positive emotional experiences with the volunteers' presence and the resources they provided. Most often this was due to the psychosocial activities they facilitated, which enabled students to connect with their friends, such as playing games.

> There was nothing, but indeed there were volunteers who came to give assistance. We got a box with stationeries and played games. One of the volunteers, I forgot where they came from, they brought games, we were happier in the field, getting rid of the trauma. (Student 20, School B)

Theme 1.2. The school as a site of recovery activities

After the disaster the school's usual function as an institution of learning was suspended as the school was repurposed as a site of recovery activities. The main facilitators of the activities were teachers and non-governmental organizations (NGOs). Most students spoke about psychosocial activities such as playing and singing and over quarter of participants referred explicitly to psychological support ('*trauma healing*') (see Figure 3).

Students described the activities as promoting feelings of, '*calm*', '*happy*' and '*lighter*'. Activities termed 'trauma healing', were described as: '*where we learned about getting rid of that trauma*'. However, students' elaborations on the content of 'trauma healing' did not differ from other psychosocial activities and, at times, included mentions of disaster preparedness training. Students spoke positively about their engagement in trauma healing, as they reported positive emotional experiences and reduced trauma.

> I also felt calm at school, because there was a trauma healing programme. (Student 2, School B)

> Being happy, it felt like the trauma has gone . . . the thought about such a thing [trauma] was all gone. Like more relaxed. Lighter. (Student 3, School B)

Trauma healing may have improved school attendance as students reported reduced anxiety. For example, following trauma healing a student reported feeling, '*not afraid to go to school*' (Student 4, School B).

Theme 2. The school as a place of risk

Alongside representing the school as a place of recovery, most participants simultaneously spoke about challenging elements of the post-disaster school; negatively valanced elaborations indicated aspects of the school environment that operated as barriers to students' recovery. This interview content clustered around the theme "the school as a place of risk", which consists of three sub-themes that capture the risks both embedded in and associated with the school environment: the school as a place of physical risk, social disruption and routine disruption.

Theme 2.1: The school as a place of physical risk

The altered physical environment was salient in the minds of over half the students. Most students considered the damage and the resulting temporary school buildings as a source of negative emotional experiences, such as fear, unhappiness and discomfort (See Figure 4).

Students expressed negative emotions, such as sadness, at the physical damage to familiar school buildings. Words such as '*cracked*', '*broken*', '*changed*' and '*damaged*' described the post-disaster school. The school was considered unfamiliar and '*unlike before*', which negatively impacted the school atmosphere.
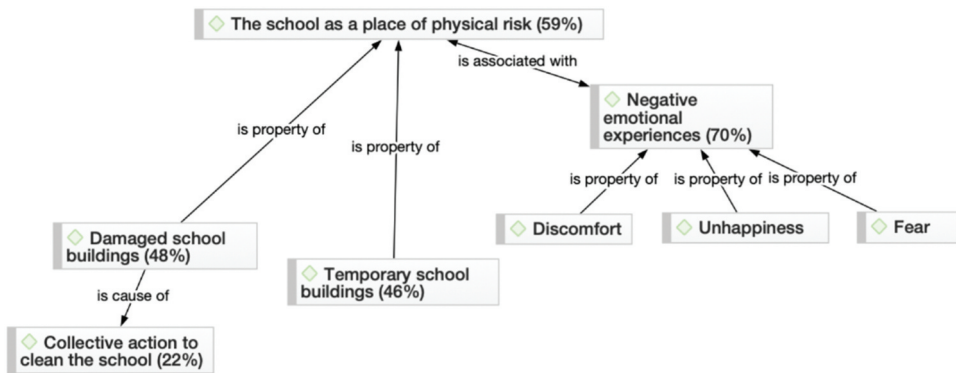
Figure 4. The school as a place of physical risk.

> I was so sad because my school was hit by the disaster. Going back to school was gloomy. Previously, schools were not like that. Only later, after the disaster. (Student 24, School C)

Damage to School C was associated with engaging in collective action to clean the disaster debris; many students described the post-disaster school as '*dirty*' with '*trash scattered around*'. This may have been due to the nature of the hazard; while earthquake and liquefaction caused structural damage, the tsunami's main damage was internal flooding of the school. While a small number of students found '*community service*' to be '*fun*' as it was done '*with friends*', for others it was a laborious activity. A small number of students expressed a lack of agency, as they felt obliged to engage in cleaning, despite its physical and emotional demands.

> What we did at that time was cleaning, the garbage that was scattered at that time, we collected and threw it in its place. And we also helped the teachers to clean the rooms that were affected by smears and water. . . . Very Sad. Yes, even if I wanted to say I was tired, I couldn't because it was for our own good too . . . I was sad because yes because many people died, many have been separated from their families . . . Sad because many of our school buildings were cracked. But couldn't say that we were tired because it was for our own school as well as for us to learn. (Student 32, School C)

Several students expressed discontent regarding temporary classrooms, by describing them as hot, uncomfortable and symbolic of post-disaster uncertainty. This led some students to feel that the tent's atmosphere was incongruent with that of their '*happy*' pre-disaster school. A small number of students spoke about the loss of microelements of their damaged school with nostalgia. As the canteen was previously a site for unstructured time with friends, this place retained symbolic significance to students, as an objectification of social ties.

> The school destroyed. So if we saw the former school canteen, we went to the old school, which has been destroyed, if we went to the school canteen, we missed the canteen, in class . . . we used to play with friends here. (Student 38, School A)

Other students expressed a more nuanced conceptualization of temporary school buildings, as while tents constituted a reminder of risk and source of physical discomfort, they simultaneously cultivated feelings of safety. This was often contrasted with students' fear of school buildings, that were objectified as places of risk.

> The school is multi-story building. So I was afraid of the high-rise school building. Beside the school, there is a tall building as well, so I feel scared. (Student 2, School B)
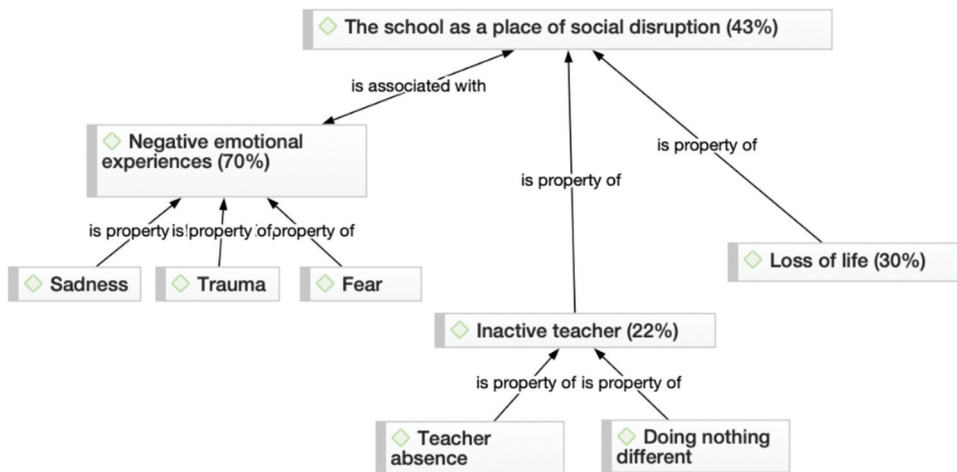
Figure 5. The school as a place of social disruption.

Theme 2.2. The school as a place of social disruption

A large minority of students represented the school as a place of social disruption, due to loss of life and the inactive role of their teachers (See Figure 5).

Juxtaposed with the positive emotions elicited by reunions with friends was a sense that the social fabric of the school had been irreversibly altered by the disaster. This was especially the case in the tsunami affected School C, as demonstrated by loss of life mentioned by double as many participants, compared to the other two schools. Loss of life was entwined with the physical school environment, as students' knowledge that corpses had been discovered at School C caused familiar places, such as toilets and certain classrooms, to be associated with death. Some students reflected on the negative emotions this elicited when they returned to school.

> Because there was a body found at the school. After the disaster. In the class section, it was also in class 9. And it was also found in the toilet. That's why the toilet was never used. So scared. (Student 24, School C)

The school's role as a hub of disaster information reinforced the prevailing sense of social disruption within the community. For some students, it was upon returning to school that they first became aware of the loss of friends or other community members, as informed by their teachers. Unsurprisingly, this news elicited negative emotions, such as sadness and fear.

> My teacher told me that a friend of mine passed away … Also my friend's parents who passed away. (Student 17, SMP 4)

Some students expressed that the relief they felt upon discovering their teacher's safety was over-shadowed by a pervasive sadness as they learnt of the death of other community members, including their teacher's children. A few students recounted intimate details of their teacher's disaster experiences and losses, indicating that stories had been shared between teachers and students or had become known within the school community. Some of these accounts included potentially traumatic and emotive content.

> As for [teachers name], her house was near here. Which was subject to liquefaction. So, that was how the land was lifted, liquefied, rotated. The child was not saved, the child was still in the house. It's just [teachers name] and the rest of the family and the other children who were out. But this one boy was inside and wasn't saved. (Student 12, School B)

A minority of students represented teachers as inactive after the disaster. At times, this was attributed to evacuation from the region or to unknown reasons for teachers being '*busy*'. A small minority of students mentioned that teachers were present but felt they did '*nothing different*' to
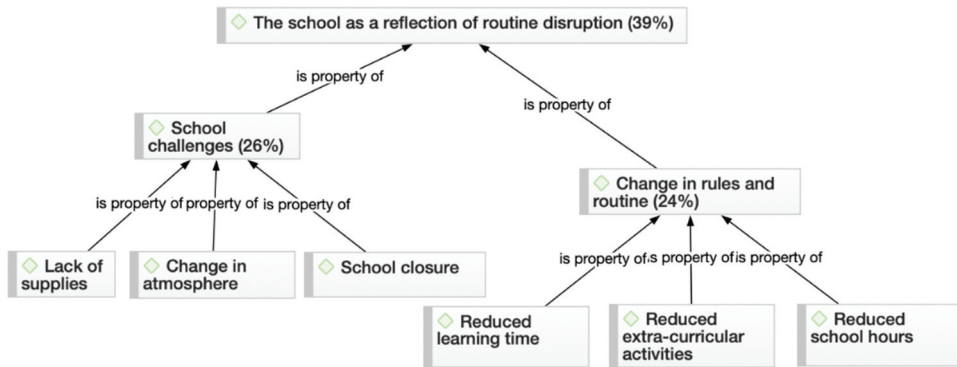
Figure 6. The school as a reflection of routine disruption.

support them. When students discussed activities, some students contrasted the active role volunteers played in running the recovery curriculum with the inactive role of the teachers, as one student said: *'most teachers just watched.'*

A small minority of students felt that the time they spent away from school had led to a loss of their meaningful teacher-student relationship. One student described that when they met the teacher, they *'felt foreign'* and *'turned into strangers'*.

> The teacher just forgot who all the students were. (Student 38, School A)

Theme 2.3. The school as a reflection of routine disruption

The sub-theme of 'the school as a reflection of routine disruption' captures the changes to rules and routines and institutional challenges, such as a loss of school supplies, that prevented students from regaining a sense of normalcy (see Figure 6).

Students' elaborations implied that the school's abnormal functioning and atmosphere reminded students of the wider community disruption caused by the disaster. Some students reflected that post-disaster challenges, such as reduced teaching hours and damaged school supplies, led to a loss of educational continuity, as *'learning was never done'*. Some students expressed discontent at the novel post-disaster routine, as valued extra-curricular activities were either cancelled or limited and the restructured day reduced social opportunities. For example, a 10–15-minute lunchbreak and prohibited socializing before or after school. While these changes were made to support student safety, some expressed that this may have hindered their recovery.

> Not good, less exciting. Because previously the playing time was longer and after the earthquake the time was limited. I felt that my relationship with my friends was strained because I didn't have enough time to play with my friends, so it felt really different. (Student 20, School B)

Some students elaborated on the challenges caused by a loss of school supplies that had both material and symbolic significance, as familiar items such as *'books'*, *'stationery'* and *'uniforms'* symbolized the functioning, familiar and safe school. Students also reported increased flexibility in school rules, such as optional school uniform. While the change in policy enabled students to resume education, this provided a visual reminder that school was *'not like it used to be'*, which reminded students of the disasters' impact and prohibited resumption of a sense of normalcy.

> Yes, casual clothes. Because some students' uniforms were swept by the tsunami. (Student 16, SMP10)

Discussion

The results of this qualitative analysis provides novel insight into how adolescents represent the role of schools and teachers after a major disaster. Via thematic analysis, two salient themes that constitute a dialogical antinomy developed: the school as a place of recovery and the school as a place of risk. While the former representation highlights the overall positive role of the school for its potential to support students' resilience and well-being after the disaster, the latter captures elements of the post-disaster school that may hinder students' resilience and exacerbate mental health adversity. Nearly all participants represented the school as *both* a place of recovery and risk; on one hand, schools were portrayed as a source of social support and recovery activities that generated feelings of safety, happiness and a reduction in trauma. On the other hand, schools were simultaneously represented as places of risk, due to the physical damage to familiar school buildings, uncomfortable temporary accommodation, disrupted social fabric and disruption to pre-disaster routines. The power of a social representations approach is that it does not attempt to impose consistency on such representations. Indeed, the concept of 'cognitive polyphasia' (Moscovici, 1961) highlights that people can hold complex, seemingly contradictory representations simultaneously.

The school as a place of recovery

The most salient theme revealed that nearly all students represented the school as a place of recovery, due to access to social support and recovery activities. This finding is consistent with previous empirical work highlighting the role of the school in providing social support in high-income countries (e.g. Mooney et al., 2021) and the theoretical work of Scannell and Gifford (2010), who argue that relationships are a central component of the attachments people form with meaningful places. The benefit of in-school relationships is supported by earlier research on social support after disasters, which consistently demonstrates that the deterioration of social networks and expectations of support are risk factors for poor mental health, while social support from multiple sources is beneficial for coping and bolstering resilience (Banks & Weems, 2014; Kaniasty & Norris, 2009; Pfefferbaum et al., 2017). Our findings extend prior evidence by making salient the students' perspectives; existing research on social support after disasters has been criticized for being 'adult-centric' (Cox et al., 2017), due to a tendency to explore how adults and service providers support young people, with a lack of consideration for peer support for recovery.

A prominent finding regards the significance of the school environment for facilitating peer-to-peer support. While it is well accepted that friendships are important for fostering resilience (Masten & Obradovic, 2008), we contribute a novel understanding of the importance of the *shared* disaster experience. Evidence elsewhere has demonstrated that students benefit from telling stories through art (e.g. Cox et al., 2017; Mutch, 2016) and peer support (e.g. Mooney et al., 2021; Prinstein et al., 1996). However, there has been little examination of the importance of *reciprocal* storytelling to support processing of potentially traumatic events. Ntontis et al. (2020) argue that experiencing the common stressor of a disaster can foster an emergent social identity that can act as the social glue to sustain social capital. This finding also corroborates Fothergill and Peek's (2006) suggestion that displaced students should be assigned new schools with existing peers.

Our novel insight regarding the value of peer-to-peer storytelling for building resilience extends to the wider school community, as students reported sharing stories with teachers. This substantiates existing research that sharing stories can help students to accept an event and normalize negative emotions, through fostering a sense of collective experience (Brown, 2011)). This can also improve knowledge of the event, as disasters are often disorientating and confusing. Talking to someone trusted can refine details about what happened while providing controlled exposure to disaster content to support emotional processing (Bateman et al., 2013). While much of this research comes from younger samples, our findings suggest similar conclusions apply to adolescents.

A prominent finding pertains to the representation of teachers as a source of social and emotional support. They listened to students, offered trusted advice, and knew students well, which corroborates existing research that claims teachers are uniquely positioned to offer post-disaster support (e. g. Mooney et al., 2021; Seyle et al., 2013). The emphasis on teacher support may have been heighted by the community's reluctance to seek help from mental health professionals, due to stigma (Hechanova & Waelde, 2017), limited availability of other forms of support and/or because advice is more readily accepted from trusted adults (Koenig & Sabbagh, 2013). Students' descriptions of the type of support received from teachers differed from the forms of support received from external professionals, often due to the pre-existing student-teacher relationship. As the region is disaster prone, representations of volunteers may have been anchored to previous disaster experiences. Therefore, it is important to consider how volunteers can complement, rather than replace, psychosocial support from trusted teachers.

Our finding that multiple relationships were embedded in the school environment is consistent with research that has found young people value different forms of support, including instrumental, social and emotional support, from various actors in their community (Cox et al., 2017). In turn, this may facilitate positive attachments to schools, as people become attached to places that nurture social relationships and group identity (Scannell & Gifford, 2010). This could bolster students' resilience, due to the cascading psychological benefits of place attachment (e.g. for positive affect, comfort-security and belonging; Scannell & Gifford, 2017). Future research would benefit from exploring why a minority of students did not represent the school as a hub of social support. This may be a continuation of these students' relationships with school and peers dating from before the disaster. Alternatively, these students may be experiencing PTSD symptoms, which can undermine social support by interfering with their ability to engage with others (La Greca et al., 2010; Lai et al., 2018; Pfefferbaum et al., 2015); if so, these students may benefit from targeted interventions.

The positively valanced elaborations from students regarding disaster activities supports prior research that finds psychosocial activities provide a safe, structured and sociable environment to foster adolescents' recovery (e.g. Betancourt, 2005; Kunz, 2009). While the loss of meaningful places can disrupt a sense of continuity through the loss of spatial and group identity (Fried, 1963; Giuliani, 2003), we found that recovery activities facilitated a reconstruction of these elements by bringing the school community together, as positive interactions between peers and supportive adults increased positive affect and fostered resilience. Furthermore, recovery activities reinforced collective beliefs among students that the school is a supportive institution, which is consistent with how schools are often regarded pre-disaster (Pacheco et al., 2022).

The school as a place of risk

Many students portrayed the damaged school environment as dangerous and uncomfortable, which they associated with negative affect, such as fear. Although there has been little research on place loss concerning schools after disasters, research on social representations of the home documents that disaster-related damage can destabilize positive representations of the home (e.g. of safety and comfort; Mallett, 2004; Sawyer et al., 2022), resulting in emotional distress and poor mental health (Harries, 2013; Hawkins & Maurer, 2011). Similarly, our findings suggest that the collective knowledge of the school as a symbol of familiarity, safety and security was undermined by loss of life (e.g. corpses in school) and on-going physical reminders of disaster risk (e.g. cracked walls); this led to a reconfiguration of the social representation of the damaged school as an object of danger and source of grief. This substantiates theory of place attachment, that argues unhappy and traumatic experiences in a place can drive negative feelings and aversion towards a place (Scannell & Gifford, 2010).

Our findings suggest that the school's physical disruption may have ruptured students' school attachments. This may have influenced school attendance, as people seek proximity to places that foster cognitions of protection, security and an absence of risk, but avoid those that do not

facilitate these psychological needs (Chatterjee, 2005; Fried, 2000). Positive attachments to meaningful places have a plethora of psychological benefits, such as providing a sense of security like the interpersonal attachment's infants form with caregivers (Bowlby, 1979; Prior & Glaser, 2006), a sense of belonging and positive emotional experiences (Scannell & Gifford, 2017). Furthermore, ongoing exposure to damaged buildings may trigger students' trauma memories (Ehlers & Clark, 2000). Therefore, our findings support existing calls for prioritizing the reconstruction of schools and the swift removal of disaster-related debris (UN Environment Programme, 2013), to restore feelings of safety and positive, resilience-promoting school attachments.

Students highlighted that micro-places within the school held unique symbolic importance that may not be salient to adults. Notably, students expressed concern over losing places that facilitated unstructured interactions with friends: the school canteen was anchored by students as a site of social interaction. This is consistent with evidence that people become attached to important places due to the symbolic meaning of their features (Stedman, 2003), such as social bonds (Lalli, 1992). This finding highlights the importance of consulting students when redesigning schools after substantial damage; school reconstruction should cultivate spaces for students that mitigate the psychological impact of the loss of symbolic places.

Our finding regarding students' narratives of cleaning up disaster debris ('*community service*'), challenges the notion that youth engagement in the recovery operation is always empowering. Recent research advocates for the involvement of adolescents in community recovery activities (Bokszczanin, 2011; Cox et al., 2017; Fothergill & Peek, 2006), as their engagement can contribute to collective efficacy, a sense of community and aid survivors' mental health (see Kaniasty & Norris, 2009). However, often students found this emotionally and physically demanding as it served as a reminder of the disaster's impact; the work was grounded in symbols related to dirt, lack of cleanliness and a spoilt environment. It is possible that students' obligation to participate can be attributed to Indonesia endorsing 'vertical collectivism' (Hofstede et al., 2010; Singelis et al., 1995). As social status differences within in-groups are pronounced, students may not have felt able to challenge the teacher's instruction. The Indonesian indigenous value of '*gotong royong*' that translates as '*mutual help*' is another salient cultural construct (Slikkerveer, 2019), that may have underpinned students' obligation to participate. However, our findings suggest that participation in the recovery efforts should be made optional, as engagement may be detrimental to some students' recovery. To further support students' recovery, our findings emphasize the importance of resuming usual routines (e.g. extra-curricular activities), to symbolize a return to normalcy and community recovery (e.g. Masten & Obradovic, 2008; Pacheco et al., 2022).

Students' references to loss of life highlights the role of schools in supporting grief reactions. Students who discussed losing friends may be in greater need of psychological support, as bereaved adolescents are at greater risk of developing PTSD than those without a close loss (Dell'osso et al., 2011). Teachers can support grieving students by modelling appropriate grief responses and leading memorial activities (Saltzman et al., 2006).

Students' portrayal of teachers as unsupportive and inactive was not prevalent in our findings; however, infrequently mentioned ideas can retain empirical and conceptual relevance in a thematic analysis (Joffe & Yardley, 2004). Idiosyncratic mentions may express something taken for granted or a less socially acceptable response (Joffe, 2011). Even if only a minority of students did not receive the expected support, this may have impaired their recovery; reaching out for support but not receiving the anticipated care can re-traumatize students (Wolpow et al., 2009). It is possible that some teachers did not provide the expected support as they were not confident to do so or because school policies directed them to follow usual academic content (Buchanan et al., 2010). Alternatively, teachers may not have had the capacity to support students while coping with their own psychological challenges (O'Toole, 2017). It is also possible that teachers were engaged in less visible tasks, including administrative duties. As most students' conceptualized teachers as supportive, teachers may have focused their limited time and resources on students they felt required support while

neglecting the needs of others. Future research would benefit from exploring the views of teachers regarding their perception of possible barriers to engaging with and supporting students.

Limitations and future directions

While our research aimed to gain insight into the views of an under-researched and marginalized population, caution must be taken in applying the findings to culturally different settings. As each disaster is influenced by a unique interplay of contextual variables that shape community vulnerability, aspects of our findings may be specific to the 2018 disaster. Even within Indonesia, care must be taken not to overgeneralize findings across regions, as local concepts influence disaster preparedness (Rahman et al., 2018; Sutton et al., 2020). Future work would benefit from considering the applicability of these findings by using the same method in other disaster-impacted Indonesian regions.

As the interviews took place over three years post-disaster, students' representations will have been influenced by the passage of time. To ensure consistency, students were interviewed within the same time period. Furthermore, we asked participants broadly about their experience 'since' the disaster, as the post-disaster recovery period is on-going and we sought to hear about anything salient for them concerning the role of teachers and schools in the post-disaster period.

We aimed to give voice to disaster-affected girls, however, we acknowledge that we have played an active role in making sense of, selecting and reporting narratives from the students' experiences. We do not subscribe to a naive view that we have been passive researchers 'discovering' themes that have 'emerged' from the data (as cautioned against by Braun & Clarke, 2006). Therefore, we consider that our own positionality as Western researchers will have influenced how we interpreted the participants voices. To mitigate this, we collaborated with local researchers and, due to COVID-19 restrictions, the British researchers did not visit the area. Certainly, in the phase of data generation this kept the Western perspective at bay. However, in future, ongoing contact with students could involve member checks, to ensure our interpretation of the themes and selected quotations resonate with participants (Thomas, 2016).

Practical implications

These findings inform the design of student-centric interventions and post-disaster educational policy and practice. Since students valued peer support through activities such as playing and story sharing, and disruptions to routines can strain their relationships, it is important to prioritize structured and unstructured peer interactions during the post-disaster school day. As students lamented the loss of micro-spaces within the school that fostered social connections, temporary schools would benefit from designated areas for young people to interact with friends. This is particularly notable as some temporary school buildings remained in place years after the disaster.

As teachers were represented as a source of psychosocial support and, less often, of disaster risk reduction advice, it is essential that teachers receive adequate training to effectively support students to cope and to safeguard students' physical needs. To mitigate any feelings of unease among students due to the absence of their usual teachers, it is important to communicate information about available members of staff who can offer support.

Conclusion

As schools have become progressively more responsible for addressing social problems, their role and the responsibilities of teachers have expanded beyond educational provision, to include offering psychosocial support to students (Skovdal & Campbell, 2015). To our knowledge, our study is the first to qualitatively examine the expanded role of schools and teachers after a disaster through the lens of SRT and place attachment theory. We have responded to the notable absence of the perspective

of young people in the existing disaster literature (Gibbs et al., 2013; La Greca & Silverman, 2006) by ensuring that students' voices have been central to our analysis. Our findings suggest that a thema of recovery/risk underpinned students' representations of the school and teachers. Three years after a major disaster, the role of the school was portrayed positively by most students, as a place that represents community recovery from disaster, by providing emotional and psychological support through access to resilience-promoting social relationships and the provision of recovery activities, that stimulated feelings of happiness, connectedness and safety. However, some aspects of the post-disaster school environment were negatively valanced and detrimental to students' resilience, including the disrupted social fabric, material damage and routine disruptions, that reminded students of the wider devastation and prevented a return to normalcy. Therefore, while our findings demonstrate that schools have the potential to foster students' resilience after disasters, overall, we found student representations of the school to be nuanced and contradictory, reflecting the complex, protracted and uncertain nature of post-disaster recovery.

Notes

1. School A experienced severe structural damage, with around 50% of buildings collapsed. School B incurred less devastating structural damage, including cracked and partially collapsed buildings. School C was inundated by tsunami, resulting in severe internal damage from flooding and sediment deposition. Relief tents reopened on site for School A and B and elsewhere in the region for School C, due to the extent of the damage and vulnerable coastal location. School A has on-going concerns about the structural integrity of their buildings, School B remains functional, despite noticeable cracks and although School C was initially structurally sound, the school has been exposed to by monthly seawater flooding and structural corrosion over time.
2. This study is part of a larger interdisciplinary project that aims to foster resilient post-disaster recovery psychosocially and by improving water sanitation and hygiene (WASH) for girls. Girls are particularly vulnerable to the psychological impacts of disasters and are uniquely affected by inadequate WASH facilities due to biological and social factors (see Garfias Royo et al., 2022). Notably, this age group (14–16-year-old girls) are at risk of not returning to school post-disaster due to helping at home, stress of handling menarche and lack of toilet facilities.
3. The average monthly salary in Indonesia is reported as 8–9 million Indonesian Rupiah (Wage Centre, 2023). 74% of the sample reported their household income to be below 4 million Indonesian Rupiah. Only 5% reported their household income to be above 8 million Indonesian Rupiah.
4. Researchers were based outside of the Central Sulawesi region of Indonesia and travel was limited by COVID-19 regulations.

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Data availability statement

The data that supports the findings of this study are available from the corresponding author upon reasonable request.

References

Banks, D. M., & Weems, C. F. (2014). Family and peer social support and their links to psychological distress among hurricane-exposed minority youth. *American Journal of Orthopsychiatry*, *84*(4), 341–352. https://doi.org/10.1037/ORT0000006

Barker, C., & Pistrang, N. (2005). Quality criteria under methodological pluralism: Implications for conducting and evaluating research. *American Journal of Community Psychology*, *35*(3–4), 201–212. https://doi.org/10.1007/s10464-005-3398-y

Bateman, A., Danby, S., & Carol Mutch and Dr Jay Marlowe, D. (2013). Recovering from the earthquake: Early childhood teachers and children collaboratively telling stories about their experiences. *Disaster Prevention & Management: An International Journal*, *22*(5), 467–479. https://doi.org/10.1108/DPM-10-2013-0177

Betancourt, T. S. (2005). Stressors, supports and the social ecology of displacement: Psychosocial dimensions of an emergency education program for Chechen adolescents displaced in Ingushetia, Russia. *Culture, Medicine and Psychiatry*, *29*(3), 309–340. https://doi.org/10.1007/s11013-005-9170-9

Billig, M. (2006). Is my home my castle? Place attachment, risk perception, and religious faith. *Environment and Behavior*, *38*(2), 248–265. https://doi.org/10.1177/0013916505277608

Bokszczanin, A. (2011). Social support provided by adolescents following a disaster and perceived social support, sense of community at school, and proactive coping. *Anxiety, Stress, & Coping*, *25*(5), 575–592. https://doi.org/10.1080/10615806.2011.622374

Bonanno, G. A., Brewin, C. R., Kaniasty, K., & La Greca, A. M. (2010). Weighing the costs of disaster: Consequences, risks, and resilience in individuals, families, and communities. *Psychological Science in the Public Interest, Supplement*, *11*(1), 1–49. https://doi.org/10.1177/1529100610387086

Bowlby, J. (1979). The Bowlby-Ainsworth attachment theory. *Behavioral and Brain Sciences*, *2*(4), 637–638. https://doi.org/10.1017/S0140525X00064955

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706QP063OA

Brown, R. (2011). Principles guiding practice and responses to recent community disasters in New Zealand. *New Zealand Journal of Psychology*, *40*(4), 86.

Buchanan, T. K., Casbergue, R. M., & Baumgartner, J. J. (2010). Consequences for classroom environments and school personnel: Evaluating Katrina's effect on schools and system response. In R. P. Kilmer, V. E. Gil- Rivas, R. G. Tedeschi, & L. G. Calhoun (Eds.), *Helping families and communities recover from disaster: Lessons learned from Hurricane Katrina and its aftermath* (pp. 117–139). American Psychological Association. https://doi.org/10.1037/12054-005

Chatterjee, S. (2005). Children's friendship with place: A conceptual inquiry. *Youth, and Environments*, *15*(1), 1–26. https://doi.org/10.1353/cye.2005.0057

Cox, R. S., Scannell, L., Heykoop, C., Tobin-Gurley, J., & Peek, L. (2017). Understanding youth disaster recovery: The vital role of people, places, and activities. *International Journal of Disaster Risk Reduction*, *22*, 249–256. https://doi.org/10.1016/J.IJDRR.2017.03.011

de Berry, J., Fazili, A., Farhad, S., Nasiry, F., Hashemi, S., & Hakimi, M. (2003). The children of Kabul: Discussions with Afghan families. *Save the Children Federation, Kabul*, For full text. http://www.savethechildren.org/pdf_publications/ChildrenofKabul.pdf

Dell'osso, L., Carmassi, C., Massimetti, G., Conversano, C., Daneluzzo, E., Riccardi, I., Stratta, P., & Rossi, A. (2011). Impact of traumatic loss on post-traumatic spectrum symptoms in high school students after the L'Aquila 2009 earthquake in Italy. *Journal of Affective Disorders*, *134*(1–3), 59–64. https://doi.org/10.1016/J.JAD.2011.06.025

Duveen, G. (2007). Culture and Social Representations. In J. Valsiner & A. Rosa (Eds.), *The Cambridge handbook of socio-cultural psychology* (pp. 543–559). Cambridge University Press.

Ehlers, A., & Clark, D. M. (2000). A cognitive model of posttraumatic stress disorder. *Behaviour Research and Therapy*, *38*(4), 319–345. https://doi.org/10.1016/S0005-7967(99)00123-0

Fothergill, A., & Peek, L. (2006). Surviving catastrophe: A study of children in hurricane Katrina. In Natural Hazards Centre (Ed.) *Learning from catastrophe: Quick response research in the wake of Hurricane Katrina* (pp. 97–130). Institute of Behavioral Science, University of Colorado:

Fried, M. (1963). The urban condition. In L. Duhl (Ed.), *The urban condition: People and policy in the metropolis* (pp. 124–152). Simon & Schuster.

Fried, M. (2000). Continuities and discontinuities of place. *Journal of Environmental Psychology*, *20*(3), 193–205. https://doi.org/10.1006/JEVP.1999.0154

Fullilove, M. (1996). Psychiatric implications of displacement: Contributions from the psychology. *The American Journal of Psychiatry American Journal of Psychiatry*, *153*, 12.

Garfias Royo, M., Parrott, E., Pacheco, E. M., Ahmed, I., Meilianda, E., Kumala, I., Oktari, R. S., Joffe, H., & Parikh, P. (2022). A Structured review of emotional barriers to WASH provision for schoolgirls post-disaster. *Sustainability*, *14*(4), 2471. https://doi.org/10.3390/SU14042471

Gibbs, L., Mutch, C., O'Connor, P., & MacDougall, C. (2013). Research with, by, for and about children: Lessons from disaster contexts. *Global Studies of Childhood*, *3*(2), 129–141. https://doi.org/10.2304/gsch.2013.3.2.129

Giuliani, M. V. (2003). Theory of attachment and place attachment. In M. Bonnes, T. Lee, & M. Bonaiuto (Eds.), *Psychological theories for environmental issues* (pp. 137–170). Ashgate.

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*(6), 945–951. https://doi.org/10.1097/00004583-199111000-00012

Hajir, B., Clarke-Habibi, S., & Kurian, N. (2022). The 'South' speaks back: Exposing the ethical stakes of dismissing resilience in conflict-affected contexts. *Journal of Intervention and Statebuilding*, *16*(1), 1–17. https://doi.org/10.1080/17502977.2020.1860608

Harries, T. (2013). Responding to flood risk in the UK. In H. Joffe, T. Rossetto, & J. Adams Eds., *Cities at Risk* (pp. 45–72). Springer Netherlands. https://doi.org/10.1007/978-94-007-6184-1_4

Hawkins, R. L., & Maurer, K. (2011). "You fix my community, you have fixed my life": The disruption and rebuilding of ontological security in New Orleans. *Disasters*, *35*(1), 143–159. https://doi.org/10.1111/j.1467-7717.2010.01197.x

Hay, R. (1998). Sense of place in developmental context. *Journal of Environmental Psychology*, *18*(1), 5–29. https://doi.org/10.1006/JEVP.1997.0060

Hechanova, R., & Waelde, L. (2017). The influence of culture on disaster mental health and psychosocial support interventions in Southeast Asia. *Mental Health, Religion & Culture*, *20*(1), 31–44. https://doi.org/10.1080/13674676.2017.1322048

Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). *Cultures and organizations: Software of the mind*. McGraw-Hill.

Höijer, B. (2011). Social representations theory. *Nordicom Review*, *32*(2), 3–16. https://doi.org/10.1515/NOR-2017-0109

Howarth, C. (2006). A social representation is not a quiet thing: Exploring the critical potential of social representations theory. *British Journal of Social Psychology*, *45*(1), 65–86. https://doi.org/10.1348/014466605X43777

Joffe, H. (2003). Risk: From perception to social representation. *British Journal of Social Psychology*, *42*(1), 55–73. https://doi.org/10.1348/014466603763276126

Joffe, H. (2011). Thematic analysis. *Qualitative Research Methods in Mental Health and Psychotherapy: A Guide for Students and Practitioners*, 209–223. https://doi.org/10.1002/9781119973249.CH15

Joffe, H., & Elsey, J. W. B. (2014). Free association in psychology and the grid elaboration method. *Review of General Psychology*, *18*(3), 173–185. https://doi.org/10.1037/GPR0000014

Joffe, H., & Yardley, L. (2004). Content and thematic analysis. In D. F. Marks & L. Yardley (Eds.), *Research methods for clinical and health psychology* (pp. 55–68). SAGE Publications.

Johnson, V. A., & Ronan, K. R. (2014). Classroom responses of New Zealand school teachers following the 2011 Christchurch earthquake. *Natural Hazards*, *72*(2), 1075–1092. https://doi.org/10.1007/s11069-014-1053-3

Kaniasty, K., & Norris, F. H. (2009). Distinctions that matter: *Mental health and disasters*. In Y. Neria, S. Galea, & F. H. Norris (Eds.), *Mental health and disasters* (pp. 175–200). Cambridge University Press. https://doi.org/10.1017/CBO9780511730030.011

Keen, S., Lomeli-Rodriguez, M., & Joffe, H. (2022). From challenge to opportunity: Virtual qualitative research during COVID-19 and beyond. *International Journal of Qualitative Methods*, *21*, 1–11. https://doi.org/10.1177/16094069221105075

Koenig, M. A., & Sabbagh, M. A. (2013). Selective social learning: New perspectives on learning from others. *Developmental Psychology*, *49*(3), 399–403. https://doi.org/10.1037/A0031619

Kunz, V. (2009). Sport as a post-disaster psychosocial intervention in Bam, Iran. *Sport in society*, *12*(9), 1147–1157. https://doi.org/10.1080/17430430903137803

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*(3), 860–867. https://doi.org/10.1016/J.JAD.2013.07.024

La Greca, A. M., & Silverman, W. K. (2006). Treating children and adolescents affected by disasters and terrorism. In P. Kendall (Ed.), *Child and adolescent therapy* (Third ed, pp. 82–356). The Guilford Press.

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*(6), 794–805. https://doi.org/10.1037/A0020775

Lai, B. S., Alisic, E., Lewis, R., & Ronan, K. R. (2016). Approaches to the assessment of children in the context of disasters. *Current Psychiatry Reports*, *18*(5), 1–8. https://doi.org/10.1007/s11920-016-0683-4

Lai, B. S., Esnard, A. M., Wyczalkowski, C., Savage, R., & Shah, H. (2019). Trajectories of school recovery after a natural disaster: Risk and protective factors. *Risk, Hazards, & Crisis in Public Policy*, *10*(1), 32–51. https://doi.org/10.1002/rhc3.12158

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*(sup2). https://doi.org/10.1080/20008198.2018.1450042

Lalli, M. (1992). Urban-related identity: Theory, measurement, and empirical findings. *Journal of Environmental Psychology*, *12*(4), 285–303. https://doi.org/10.1016/S0272-4944(05)80078-7

Le Brocque, R., De Young, A., Montague, G., Pocock, S., March, S., Triggell, N., Rabaa, C., & 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), 1–23. https://doi.org/10.1017/JGC.2016.17

Low, S. M., & Altman, I. (1992). Place Attachment. *Place Attachment*, 1–12. https://doi.org/10.1007/978-1-4684-8753-4_1

Mallett, S. (2004). Understanding home: A critical review of the literature. *The Sociological Review*, *52*(1), 62–89. https://doi.org/10.1111/j.1467-954x.2004.00442.x

Marková, I. (2003). *Dialogicality and social representations: The dynamics of mind*. Cambridge University Press.

Masten, A. S. (2001). Ordinary magic: Resilience processes in development. *American Psychologist*, *56*(3), 227–238. https://doi.org/10.1037/0003-066X.56.3.227

Masten, A. S. (2013). Global perspectives on resilience in children and youth. *Child Development*, *85*(1), 6–20. https://doi.org/10.1111/cdev.12205

Masten, A. S. (2019). Resilience from a developmental systems perspective. *World Psychiatry*, *18*(1), 101. https://doi.org/10.1002/WPS.20591

Masten, A. S. (2021). Resilience of children in disasters: A multisystem perspective. *International Journal of Psychology*, *56*(1), 1–11. https://doi.org/10.1002/IJOP.12737

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*(1), 227–257. https://doi.org/10.1146/annurev-psych-120710-100356

Masten, A. S., Narayan, A. J., Silverman, W. K., & Osofsky, J. D. (2015). Children in war and disaster. *Handbook of Child Psychology and Developmental Science*, 1–42. https://doi.org/10.1002/9781118963418.CHILDPSY418

Masten, A. S., & Obradovic, J. (2008). Disaster preparation and recovery: Lessons from research on resilience in human development. *Ecology and Society*, *13*(1). https://doi.org/10.5751/ES-02282-130109

Matsuura, S., & Shaw, R. (2015). Exploring the possibilities of school-based recovery and community building in Toni District, Kamaishi. *Natural Hazards*, *75*(1), 613–633. https://doi.org/10.1007/s11069-014-1344-8

McKinzie, A. E., & Clay-Warner, J. (2021). The gendered effect of disasters on mental health: A systematic review. *International Journal of Mass Emergencies & Disaster*, *39*(2), 227–262. https://doi.org/10.1177/028072702103900202

Mooney, M., Tarrant, R., Paton, D., Johnston, D., & Johal, S. (2021). The school community contributes to how children cope effectively with a disaster. *Pastoral Care in Education*, *39*(1), 24–47. https://doi.org/10.1080/02643944.2020.1774632

Moscovici, S. (1961). *La psychoanalyse, son image et son public*. Presses Universitaires de France.

Moscovici, S. (1973). *Foreword. In* Health and illness: A social psychological analysis. Academic Press.

Moscovici, S. (1984). The phenomenon of social representations. In R. Farr & S. Moscovici (Eds.), *Social representations* (pp. 3–69). Cambridge University Press.

Moscovici, S., & Marková, I. (1998). Presenting social representations: A conversation. *Culture & Psychology*, *4*(3), 371–410. https://doi.org/10.1177/1354067X9800400305

Mutch, C. (2014). The role of schools in disaster preparedness, response and recovery: What can we learn from the literature? *Pastoral Care in Education*, *32*(1), 5–22. https://doi.org/10.1080/02643944.2014.880123

Mutch, C. (2015). The role of schools in disaster settings: Learning from the 2010-2011 New Zealand earthquakes. *International Journal of Educational Development*, *41*, 283–291. https://doi.org/10.1016/j.ijedudev.2014.06.008

Mutch, C. (2016). Schools as communities and for communities: Learning from the 2010-2011 New Zealand earthquakes. *School Community Journal*, *26*(1), 115–138. http://www.schoolcommunitynetwork.org/SCJ.aspx

Mutch, C. (2018). The role of schools in helping communities copes with earthquake disasters: The case of the 2010–2011 New Zealand earthquakes. *Environmental Hazards*, *17*(4), 331–351. https://doi.org/10.1080/17477891.2018.1485547

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*, *65*(3), 207–239. https://doi.org/10.1521/psyc.65.3.207.20173

Ntontis, E., Drury, J., Amlôt, R., Rubin, G. J., & Williams, R. (2020). What lies beyond social capital? The role of social psychology in building community resilience to climate change. *Traumatology*, *26*(3), 253–265. https://doi.org/10.1037/TRM0000221

O'Connor, C., & Joffe, H. (2020). Intercoder reliability in qualitative research: Debates and practical guidelines. *International Journal of Qualitative Methods*, *19*, 1609406919899220. https://doi.org/10.1177/1609406919899220

O'Toole, V. M. (2017). "I thought i was going to die": Teachers' reflections on their emotions and cognitive appraisals in response to the February 2011 Christchurch earthquake. *New Zealand Journal of Psychology*, *46*(2), 71–86.

Pacheco, E. M., Parrott, E., Oktari, R. S., & Joffe, H. (2022). How schools can aid children's resilience in disaster settings: The contribution of place attachment, sense of place and social representations theories. *Frontiers in Psychology*, *13*, 1004022–100422. https://doi.org/10.3389/FPSYG.2022.1004022

Paton, D., & Johnston, D. (2017). *Disaster resilience: An integrated approach* (2nd ed). Charles C Thomas.

Peek, L. (2008). Children and disasters: Understanding vulnerability, developing capacities, and promoting resilience - an introduction. *Children Youth and Environments*, *18*(1), 1–29. https://doi.org/10.1353/cye.2008.0052

Pemerintah Provinsi Sulawesi Tengah. (2019). Laporan Finalisasi Data dan Informasi Bencana Gempa Bumi, Tsunami dan Likuifaksi Padagimo di Sulawesi Tengah. *Pemerintah Provinsi Sulawesi Tengah*. https://monitoring.skp-ham.org/wp-content/uploads/2020/04/Laporan-Finalisasi-Data-dan-Informasi-Bencana-Gempa-Bumi-Tsunami-dan-Likuifaksi-Padagimo-di-Sulawesi-30-Jan-2019.pdf

Pfefferbaum, B., Jacobs, A. K., Houston, J. B., & Griffin, N. (2015). Children's disaster reactions: The influence of family and social factors. *Current Psychiatry Reports*, *17*(7), 1–6. https://doi.org/10.1007/s11920-015-0597-6

Pfefferbaum, B., Jacobs, A. K., Jones, R. T., Reyes, G., & Wyche, K. F. (2017). A skill set for supporting displaced children in psychological recovery after disasters. *Current Psychiatry Reports*, *19*(9), 1–8. https://doi.org/10.1007/s11920-017-0814-6

Pretty, G. H., Chipuer, H. M., & Bramston, P. (2003). Sense of place amongst adolescents and adults in two rural Australian towns: The discriminating features of place attachment, sense of community and place dependence in relation to place identity. *Journal of Environmental Psychology*, *23*(3), 273–287. https://doi.org/10.1016/S0272-4944(02)00079-8

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*(4), 463–475. https://doi.org/10.1207/s15374424jccp2504_11

Prior, V., & Glaser, D. (2006). *Understanding attachment and attachment disorders: Theory, evidence, and practice*. Jessica Kingsley Publishers.

Rahman, A., Sakurai, A., & Munadi, K. (2018). The analysis of the development of the Smong story on the 1907 and 2004 Indian Ocean tsunamis in strengthening the Simeulue island community's resilience. *International Journal of Disaster Risk Reduction*, *29*, 13–23. https://doi.org/10.1016/J.IJDRR.2017.07.015

Relph, E. (1976). *Place and placelessness*. Pion Limited.

Robinson, S., Murphy, H., & Bies, A. (2014). Structured to partner: School district collaboration with nonprofit organizations in disaster response. *Risk, Hazards, & Crisis in Public Policy*, 5(1), 77–95. https://doi.org/10.1002/RHC3.12047

Roisman, G. I., Padrón, E., Sronfe, L. A., & Egeland, B. (2002). Earned–secure attachment status in retrospect and prospect. *Child Development*, 73(4), 1204–1219. https://doi.org/10.1111/1467-8624.00467

Saltzman, W. R., Layne, C. M., Steinberg, A. M., & Pynoos, R. S. (2006). Trauma/grief-focused group psychotherapy with adolescents. In L. A. Schein, H. I. Spitz, G. M. Berlingame, & P. R. Mushkin (Eds.), *Psychological effects of catastrophic disasters: Group approaches to treatment* (pp. 669–730). Haworth. https://doi.org/10.4324/9781315821306-18

Sawyer, I., Fardghassemi, S., & Joffe, H. (2022). How the home features in young adults' representations of loneliness: The impact of COVID-19. *British Journal of Social Psychology*, 61(4), 1351–1375. https://doi.org/10.1111/BJSO.12540

Scannell, L., & Gifford, R. (2010). Defining place attachment: A tripartite organizing framework. *Journal of Environmental Psychology*, 30(1), 1–10. https://doi.org/10.1016/J.JENVP.2009.09.006

Scannell, L., & Gifford, R. (2017). The experienced psychological benefits of place attachment. *Journal of Environmental Psychology*, 51, 256–269. https://doi.org/10.1016/j.jenvp.2017.04.001

Seddighi, H., & Salmani, I. (2019). Gender differences in children mental health disorders after earthquakes in Iran: A systematic review. *Journal of Community Health Research*, 8(1), 54–64. https://doi.org/10.18502/JCHR.V8I1.562

Seyle, D. C., Widyatmoko, C. S., & Silver, R. C. (2013). Coping with natural disasters in Yogyakarta, Indonesia: A study of elementary school teachers. *School Psychology International*, 34(4), 387–404. https://doi.org/10.1177/0143034312446889

Singelis, T. M., Triandis, H. C., Bhawuk, D. P. S., & Gelfand, M. J. (1995). Horizontal and vertical dimensions of individualism and collectivism: A theoretical and measurement refinement. *Cross-cultural research*, 29(3), 240–275. https://doi.org/10.1177/106939719502900302

Skovdal, M., & Campbell, C. (2015). Beyond education: What role can schools play in the support and protection of children in extreme settings? *International Journal of Educational Development*, 41, 175–183. https://doi.org/10.1016/J.IJEDUDEV.2015.02.005

Slikkerveer, L. J. (2019). *Gotong Royong: An indigenous institution of communality and mutual assistance in Indonesia* 307–320. https://doi.org/10.1007/978-3-030-05423-6_14

Smith, N., & Joffe, H. (2013). How the public engages with global warming: A social representations approach. *Public Understanding of Science*, 22(1), 16–32. https://doi.org/10.1177/0963662512440913

Stedman, R. C. (2003). Is it really just a social construction?: The contribution of the physical environment to sense of place. *Society and Natural Resources*, 16(8), 671–685. https://doi.org/10.1080/08941920309189

Sutton, S. A., Paton, D., Buergelt, P., Meilianda, E., & Sagala, S. (2020). What's in a name? "Smong" and the sustaining of risk communication and DRR behaviours as evocation fades. *International Journal of Disaster Risk Reduction*, 44, 101408. https://doi.org/10.1016/j.ijdrr.2019.101408

Tearne, J. E., Guragain, B., Ghimire, L., Leaning, J., & Newnham, E. A. (2021). The health and security of women and girls following disaster: A qualitative investigation in post-earthquake Nepal. *International Journal of Disaster Risk Reduction*, 66, 102622. https://doi.org/10.1016/J.IJDRR.2021.102622

Thomas, D. R. (2016). Feedback from research participants: Are member checks useful in qualitative research? *Qualitative Research in Psychology*, 14(1), 23–41. https://doi.org/10.1080/14780887.2016.1219435

UN Environment Programme. (2013). *Disaster Waste Management Guidelines*. Https://Wedocs.Unep.Org/Bitstream/Handle/20.500.11822/27291/DisaterWM_guidelines.Pdf? Sequence=1&isAllowed=y#:~:Text=Disaster%20waste%20is%20a%20well,Made%20in%20future%20response% 20efforts.

Wage Centre. (2023). *Salary in Indonesia*. https://wagecentre.com/work/work-in-asia-and-oceania/salary-in-indonesia

Widyatmoko, C. S., Tan, E. T., Seyle, D. C., Mayawati, E. H., & Silver, R. C. (2011). Coping with natural disasters in Yogyakarta, Indonesia: The psychological state of elementary school children as assessed by their teachers. *School Psychology International*, 32(5), 484–497. https://doi.org/10.1177/0143034311402919

Wolmer, L., Hamiel, D., & Laor, N. (2011). Preventing children's posttraumatic stress after disaster with teacher-based intervention: A controlled study. *Journal of the American Academy of Child & Adolescent Psychiatry*, 50(4), 340–348. https://doi.org/10.1016/j.jaac.2011.01.002

Wolpow, R., Johnson, M. M., Hertel, R., & Kincaid, S. O. (2009). *The heart of learning and teaching: Compassion, resiliency, and academic success*. Washington State Office of Superintendent of Public Instruction Compassionate Schools. www.k12.wa.us/CompassionateSchools/Resources.aspx

Zadeh, S. (2017). The implications of dialogicality for 'giving voice' in social representations research. *Journal for the Theory of Social Behaviour*, 47(3), 263–278. https://doi.org/10.1111/JTSB.12136