
Article

How Teachers Enable Primary School Students to be Resilient in Times of Ranau Earthquake

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Abstract: The Ranau Earthquake that struck on 5, June 2015 and follow by February 2018 and April 2021, were a new disaster in Sabah and caused many Sabahan to panic. The unpredicted disaster also caused a serious impact on all aspects of life in Sabah. The earthquake has caused severe damage to eight primary schools in the vicinity of the epicenter; although no casualties were reported. However, the disaster has passing deep psychological effects among students. In this study, we examine how the primary school teachers enabled the student to be resilient during and after the disaster. Based on the interviews of 16 primary school students it was revealed that most of the teachers used WhatsApp to support resilience during and after the earthquake. Interviews with 16 primary school teachers revealed there were two main reasons for them to communicate with students namely, delivering emotional aid and monitoring their stress. Based on student interviews, five content categories of emotional support were identified: caring, reassuring, emotion sharing, belonging, and distracting. The main contribution of this study is social media can be used as a spontaneously and proactive tool to support student's resilience during and after the earthquake trauma.

Keywords: earthquake; resilience; WhatsApp; emotional support

1. Introduction

The earthquake refers to the vibrations experienced by the crust when energy is released due to friction or plate friction. This shock will produce a seismic wave that is in the form of a circle starting at the center of the quake. It occurs in three stages, namely the initial tremor, the main shake and the end of the tremors. The stronger the tremors will be, the greater the seismic waves to be released and the earthquake phenomenon will become more and more powerful. According to Arbogast and Strahler, the friction between the two plates allows energized energy [1-2]. The accumulated power that cannot be buried again will be released. This causes the earth's crust to vibrate. An earthquake usually occurs along with the continental plate and 75% of Earthquakes in the world are in effect of the Pacific API Link. Generally, there are two types of earthquakes that occur, namely the technological and volcanic earthquakes. Tectonic earthquakes occur as a result of sudden energy releases when tectonic plates collide, diverge, and diffuse between each other. While volcanic earthquakes occur as a result of volcanic eruptions that cause magma movement and breakdown of the rocks in the holes.

Malaysia is one of the world's most strategic geographical locations and is safe from earthquake threats because it is located outside the Circle line [3], which is the main zone of volcanoes and earthquakes. However, Malaysia has experienced a series of small



earthquakes which have been impacted by neighboring countries in the earthquake zone [4]. For example, in 2007-2008, the Richter scale earthquake between 2.7 and 3.5 occurred in Bukit Tinggi and was believed to be caused by a strike-slip and also associated with the release of earth pressure due to earthquakes occurring in Sumatra, Indonesia (MOSTL 2009) [5]. Additionally, since the 1960s, Sabah located on Plat Sunda was exposed to 80 series of earthquake catastrophe with a strength ranging from 3.3 to 5.0 Richter scale.

Felix Tongkul, a geologist from University Malaysia Sabah states that almost all areas in Sabah have the risk of earthquake and this level of risk varies according to the area based on the activity of seismic activity or the movement of the earth in each area [3]. However, he stressed that the Ranau-Kundasang and Lahad Datu-Kunak areas were at higher risk than elsewhere. In addition, the Sabah Meteorological Department reported in the next 20 years, a strong scale earthquake will hit Sabah.

2. Literature Review

Razan and Ebit reported that since 1897, the north and northeast of Sabah, have experienced at least 80 earthquakes [6]. On June 5, 2015, a powerful earthquake with a 5.9-magnitude scale in the Ranau area was one of the districts on the North West Coast of Sabah. The Center for Earthquake and Tsunami National reported the epicenter centered at 6.1 north, 116.6 easts, about 16 kilometers south-west of Ranau. Earthquakes were detected at a depth of 54 kilometers below the ground in Tambunan, inland and west coast, including Tuaran, Kota Kinabalu, Beaufort and Kota Belud. Statement from the Senior Director of the National Earthquake & Tsunami Center of the Malaysian Meteorological Department, Dr. Wan Azli Wan Hassan said that the crossover lines or rock layers in the earth moving between blocks and other blocks were suddenly one of the causes of this catastrophic event. The Meteorological Department reported that 100 follow-up shocks took place after the earthquake including the Richter 5.1 scale earthquake, early June 13 [7]. The earthquake has caused severe damage to ten primary schools and eight high schools. However, no casualties were reported. The Ranau District Education Office reported that among the damage that occurred was the fracture of the school building. An earthquake that took place on 5, June 2015 also disrupted the well-being of life and profound psychological effects were seen amongst rural pupils and teachers. A study conducted by Singh et al., shows students living around schools near the epicenter point are very worried and traumatized by the earthquake shaking [7]. This is because they are not well-prepared and ready for this disaster. These concerns and trauma cause the students to have sleep issues enough for fear of an earthquake following. Therefore, this study was conducted to study how school teachers support student resilience, that is their ability to maintain stable levels of psychological and behavioral functioning in the face of the earthquake in Ranau.

3. Materials and Methods

3.1. The Current Study

The data for the current study was collected after Ranau hits by Earthquake on 22 February 2018. The data collected through semi-structured, one-to-one interviews.

3.2. Participants

The information for the present study was gathered after six months of the Ranau earthquake. A total 12 primary schools were located at Ranau District in Sabah. Purposive sampling methods were applied to select eight primary schools which were badly affected by earthquake in 2015 and 2018. The same sampling methods were applied to select one junior (less than five years teaching in the school) and senior teacher (more

than five years teaching in the school) from each school. A total 16 teacher were interviews

Purposive sampling methods were also applied to select two students from each school. A total 16 students were selected for interview.

3.3. Teacher Data Collection

A one-on-one, in-depth interview was conducted with 18 primary school teachers in their school meeting rooms. According to Guest, Bunce, & Johnson, in-depth interviews is the best choice to reveal insight into respondent and to give a more profound understanding into respondents' experiences, emotions and attitude [8]. A total of 18 one-to-one interviews were conducted. The interviews were conducted by the trained research assistants for 60 to 90 minutes and were audio-taped.

3.4. Student Data Collection

The interviews were conducted on a one-to-one basis in the school's administrative meeting room. The venue was chosen because it was cozy, appropriate, and secured from interruptions. A total of 18 interviews were conducted. Each interview session began with a brief description of the structure of the interview to be conducted and ended with the researcher thanking the student for their participation and ensuring them of the confidentiality of their responses. The researcher also assured the students that their responses will be kept confidential. Each interview session took around 50 and 60 minutes to be conducted and all the sessions were audiotaped.

3.5. Data Analysis

The verbal content of the interviews data in the current study was transcribed and were analyses based on the six phases of thematic analysis suggested by Braun and Clarke [9]: a) the audiotapes of the student participants were transcribed verbatim. The transcribed version was then checked again with the tapes for accuracy; b) open coding was used to create categories or related codes from the initial points, this having been identified in the data familiarization process; c) The initial codes created during the open coding were refined. The refined codes were then analyses with a view to re-arranging and collating the different codes in potential themes; d) the initial themes were reviewed again to refine, combine or separate them to generate overarching themes e) examining the validity of the themes with respect to the data set as a whole by moving back and forth between the data extracts and themes f) the themes using direct quotations from the data set. The findings were then triangulated with the quantitative findings to provide an explanation and better understanding of this study's findings.

4. Results

4.1. Students view on how school teachers contact them after the earthquake

Almost all the student participants were saying that the school teachers used WhatsApp, telegram and text messages to contact them. Below are some of the citations from the students' responses.

"Teacher always contacts me through WhatsApp and advises me not to be afraid and everything will be alright." (Participant 1)

"She messaged me last night through telegram. She asked me to pray, stay strong and not get afraid of the earthquake." (Participant 12)

The above responses seem to suggest that social media can be used as one of the important tools to support students' emotions during a natural disaster.

4.2. Student perspectives on the benefit of communication with their teachers

Ten of the students' participants reported the communication with their teacher make them feel that the teachers care for their emotional state during and after the earthquake for example participant 8 was saying:

"I had a more grounded suspicion that all is well and good since I realized that the teacher was caring and thinking about us." (Participant 8)

The respondent elaborated further that the conversations with the teacher act as an interference helping them to divert their attention from the negative experiences which helped the students to cope with the situation by taking their mind off the stressful events.

Another Student mentioned that having communication interaction with their teacher acts as a platform for emotional sharing. Students reported that their teachers were available figures with whom they could express their fears and share their distress.

Another student explained that the conversation with their teacher is a stage for passionate sharing. Students detailed that their teachers were accessible figures with whom they could share their feelings of dread and offer their distress.

4.3. The reason for teachers to interact with students

The teachers' interview data analysis yielded two unmistakable teacher intentions correspond with their students after the earthquake.

4.3.1. Emotional Support

According to the teachers, their first motive was to interact with students after the earthquake and provide emotional support to their students without any personal connections in the classroom.

Teachers believe that they progress students resolve and give psychological support in a prompt and unhampered way. These included sending quieting messages which were sending following negative earthquake-related news. More interestingly, online emotional support was found to be two-way communication between teachers and students. Two of the interview teachers reported that a few of the students were expressing their concerns towards the teacher. For example, one secondary school teacher giving an example of the student's concerns:

"Teacher, I heard that our school was badly damaged because of the earthquake. I pray that you are ok and take care." (TS9)

The teachers offered three purposes behind why they trusted this "reversed" emotional support to be important (1) it demonstrated a genuine worry for educators, as a disguise of the instructive brilliant principle of correspondence (regarding others as one would wish to be dealt with); (2) worried for others may diminish students' own fears; (3) these outflows of concern fortify the common association among instructors and students.

4.3.2. Observing Distress

Another intention of communicating through WhatsApp with their students was to observe the students' distress after the earthquake. A few teachers deciphered their student' quietness on the web is a sign of emotional difficulties:

"Most of the school students expressed their thought and feelings on WhatsApp. It was all there: fears, tensions, adapting techniques. It was accordingly clear that those students, who decide not to take part in the online discussions, are experiencing issues in emotional sharing. So, I have decided to visit their house and contact them personally." (TS 4)

Nearly all of the students expressed their thought and feeling on WhatsApp. All of it was there: worries, tension, adapting techniques such as crawl under the table, stay away from the window, and protecting head with a pillow. This is very clear that students who are not interested to join the online discussion are having a problem with emotional sharing. Thus, I have decided to visit their home.

5. Discussion

This study aims to investigate how teachers supporting students' resilience after the Ranau earthquake. The analysis of students' interview data shows that most of the teachers communicate through WhatsApp and this communication has played an important role in contributing to student resilience. Data were gathered from students, additionally from the teachers' point of view. The data from student interviews show that the teachers prefer to use WhatsApp, telegram, and text messages to contact them for emotional support. The students' interviews also revealed that the emotional support was delivered by showing they cared for the students' prosperity, by giving express consolation, through respond feeling sharing by giving a feeling of having a place, and by diverting students from unpleasant considerations and occasions. The essential commitment of the present study is to the literature on students' resilience during the traumatic situation and the teacher's psychosocial role in them. Formal school-based trauma program to reinforce students' resilience traditionally envisions the teacher's role as a part of the recovery procedure and after the occurrence of the traumatic occasion [10-11]. This study also discovers that teachers unexpectedly offer constant interventions through WhatsApp during the traumatic event without any formal guidance to do such actions. Another contribution of the present study is to the rising literature on the usage of social media in times of massive-scale disaster. This specific literature has already demonstrated the benefits of information sharing in real-time [12-13]. For instance, using Facebook enabled university officers to coordinate a response to an earthquake disaster [14-15]. The present study broadens past findings, which show another capability of web-based social networking inside the midst of emergencies, to be more specific to mortgage social-emotional support and help students enhance their resilience [16-18].

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