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Group-based mindfulness-informed psychological first aid after Typhoon Haiyan

Ma. Regina M. Hechanova
Ateneo de Manila University

Pia Anna P. Ramos

Lynn Waelde

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Abstract

Purpose – The purpose of this paper is to develop and evaluate a culturally sensitive and mindfulness-informed psychological first aid (PFA) intervention for use with disaster workers in the Philippines intended to increase disaster knowledge and disaster coping self-efficacy.

Design/methodology/approach – The study used a non-experimental, pre-test, post-test design. Measures of disaster knowledge and disaster coping self-efficacy were measured before and after the PFA intervention.

Findings – Paired sample \( t \)-tests revealed significant pre/post-increases in knowledge about disaster reactions and disaster coping self-efficacy. Workshop evaluations indicated that the following proportions of participants rated these workshop components as the most useful: mindfulness, information about disaster reactions, small group sharing, information about coping, and the open space activity.

Research limitations/implications – As in many disaster studies, it was not possible to include a randomized control group in the design. Another limitation was that only pre- and post-intervention data were collected. Future research should include longer-term follow-ups with participants to assess whether the benefits of the intervention are maintained over time. Future research may wish to address the limitations of the study including the lack of a control group and obtaining follow-up data to enable more robust conclusions.

Practical implications – These results indicate how the use of a group-based intervention may be helpful especially in a collectivist culture. At the same time, acknowledging cultural values such as spirituality is an important component to providing psychosocial support for survivors. Mindfulness was found useful both as an initial calming activity as well as a means for helping survivors manage their stress reactions. Finally, the utilization of an open space activity can also be a helpful problem-solving mechanism when done in intact groups, as it enhances not just self-efficacy but also community efficacy among survivors.

Originality/value – The study contributes to the dearth of knowledge on the use of PFA when used in a group, collective, and developing country setting.

Keywords Philippines, Aftercare, Disasters, Emergency response, Natural hazard, Typhoon Haiyan

Paper type Research paper

The regularity of disasters over the past decades has led to increasing interest in appropriate psychosocial support interventions. One post-emergency intervention that has been developed in recent years is Psychological First Aid (PFA) (Brymer et al., 2006;
World Health Organization, 2011). This intervention is based on five core principles that have broad empirical support for facilitating positive adaptation following trauma: promoting sense of safety, promoting calming, promoting sense of self- and community efficacy, promoting connectedness, and instilling hope. These core principles have been translated into eight core actions: contact, safety and comfort, stabilization, information gathering, practical assistance, social supports, coping, and linking with collaborative services (Vernberg et al., 2008).

The evidence on efficacy of PFA is still in its infancy. A longitudinal study of the impact of PFA on children survivors of Hurricane Katrina found significant improvement in PTSD symptoms two years after the event (Cain et al., 2010). A survey of providers who responded to Hurricanes Gustave and Ike found that they perceived PFA as an appropriate intervention and regarded the core actions of contact, safety and comfort, and practical assistance to be the most helpful to survivors (Allen et al., 2010).

Beyond the issue of efficacy, Litz (2008) advocated the need to adapt PFA to survivors’ culture, ethnicity, religious affiliation, race, and languages. He suggested that providers of PFA should recognize, maintain, and strengthen the customs, traditions, rituals, structures, roles, and bonds that facilitate survivor coping. Dueck and Byron (2012) reported that in China, communal therapy deeply embedded in traditional cultural and religious practices and beliefs is effective in relieving the trauma of survivors and in providing them with ways of coping after a disaster.

PFA is typically done individually. However, there are those who argue that PFA can be done in groups because sharing experiences, normalizing reactions, and helping others may provide mutual support (Johnstone, 2007). Unfortunately, there is a dearth of literature on group-based PFA interventions.

Disasters, mental health resources, and coping in the Philippines

The need to study disaster interventions becomes even more urgent in disaster-prone countries. The Philippines, for example, is situated in the volcanic “Ring of Fire” and has many active volcanoes. A major fault line traverses the entire length of the country that triggers numerous earthquakes. Moreover, the country is struck by an average of 10-20 typhoons in a year (Conde, 2004).

The vulnerability to disasters is exacerbated by the poverty and the lack of mental health resources in the Philippines. Its government spends only 4.6 percent of its GDP on health care, as compared to the USA (17.9 percent), Australia (9.1 percent), or Mexico (6.2 percent) (WHO, 2012). Beyond material resources, a critical factor in the delivery of psychosocial interventions is human resources. Unfortunately, the World Health Organization (2007) reports a severe shortage in the Philippines. Unlike Canada, where there is one mental health practitioner (MHP) for every 7,930 people in Canada or Mexico where the ratio of MHP to citizens is 1:63,694, in the Philippines, there is only one MHP for every 263,000 Filipinos (WHO, 2012). In addition, majority of mental health resources are concentrated in the urban center (Conde, 2004). Thus, providing individual interventions become difficult given the dearth of mental health providers and lack of resources for mental health especially in the rural areas. Not surprisingly, group counseling or processing is a common strategy used post-disasters in the Philippines (Carandang, 1996).

Beyond the lack of mental health providers and resources, one reason for the reliance on group interventions in the Philippines is culture. The Philippines has been described as a collectivist culture (Triandis, 2001). In collectivist cultures, the self is interdependent to the in-group (family, clan, and those considered as close friends). Whereas individualists
concern themselves with their own needs and goals, collectivists concern themselves with relationships (Triandis, 2001). Social connections are an important source of resilience among Filipinos (Adviento and De Guzman, 2010). A study on flooding in rural communities in the Philippines report that the indigenous sense of communality or *pakikipagkapwa* allows survivors to rely on neighbors, friends, and relatives for food or small loans. The Filipino value of *bayanihan* is manifested in the mutualization of labor and the mobilization of community members during disasters (Galliard, *et al.*, 2008).

Another cultural consideration in providing psychosocial support in the Philippines is the role of spirituality. Given a pre-dominantly Catholic population, spiritual coping is commonly reported by Filipino disaster survivors (Carandang, 1996; Ladrido-Ignacio, 2011). Filipino tend to view a situation in the light of God’s will. Survivors accept tragedy and believe that God is constantly with them in times of crisis. This sustains their optimism that they will recover (Ladrido-Ignacio, 2011). Carandang (1996) emphasized the value of community healing rituals and being able to tap spiritual leaders in the community who can more adequately care for spiritual needs of survivors.

An additional adaptation of PFA was the inclusion of mindfulness training. Mindfulness and meditation-informed interventions are growing in popularity and evidence is accumulating that they are useful approaches to integrate with post-disaster and post-traumatic care among disaster workers and other caregivers (Waelde, 2015; Waelde *et al.*, 2004, 2008). Mindfulness training may aid disaster responders by providing a skill-based method to manage stress reactions that can occur in the disaster zone, particularly for local responders who may themselves be affected (Hansel *et al.*, 2011).

**Group-based PFA intervention post-Typhoon Haiyan**

On November 8, 2013, super Typhoon Haiyan, with its wind gusts of 315 kph and the strongest tropical cyclone ever recorded, made landfall in the eastern part of the Philippines. It killed over 6,000 people and affected over 16 million Filipinos (NDRMMC, 2014). This study sought to evaluate an intervention conducted six weeks after Typhoon Haiyan hit among survivors in three different sites. The intervention aimed to provide a culturally sensitive, mindfulness-informed PFA along with psycho-education about reactions to disasters and coping skills.

**Venue**

A basic principle in the conduct of PFA is to provide a sense of safety (Vernberg *et al.*, 2008). To provide this, survivors were transported and lodged in a location not directly affected by the typhoon. Upon arrival, they were welcomed by a high-ranking official and provided meals and drinks.

**Assessment**

Given the group-based approach, it was important to consider the issue of vicarious trauma, which may occur when participants share details of their disaster experiences with others. Because traumatized persons may wish to discuss their experiences and may need specialized assistance (Brymer *et al.*, 2006; World Health Organization, 2011), we sorted participants into small groups based on their baseline levels of post-traumatic stress symptoms (PSS). We administered a brief, well-validated, PSS scale (Weathers *et al.*, 1993) to participants prior to the workshop. Participants who scored above the cutoff for significant symptom levels were grouped together and experienced counselors facilitated their groups. However, to avoid stigmatization, group assignments were announced with no reference to PSS scores.
Mindfulness training
Because a key element of PFA is promoting a sense of calm and stabilization (Vernberg et al., 2008), the intervention began with a brief mindfulness training. Participants were taught mindful awareness of breathing and the “letting go exercise,” designed to help participants recognize and let go of stress as it is occurring, rather than attempting to cognitively avoid or elaborate on it. The mindful breathing exercise entailed instructions to notice every part of each inhalation and exhalation, including noticing “the air as it comes in through your nose, past your throat, then notice where the air goes after that. Notice what happens when you exhale. Watch the breath as it flows past your chest, past your throat and out your nose.” The letting go exercise included instructions to picture a balloon or bubble expanding with the inhalation and dissolving any sense of tension or holding, and with the exhalation, to let go of any sense of tension or holding (Waelde, 2005). Mindfulness exercises were also repeated in between each session or following a break. Participants received handouts describing these techniques to aid their ongoing practice of the techniques, both in daily life and for short periods of sitting meditation.

Group sharing
After the initial mindfulness activity, participants were divided into groups with five to seven members. In keeping with a core PFA action of contact, each small group facilitator asked the participants to introduce themselves and to share how they were doing at that moment. Facilitators normalized mild anxiety reactions and validated positive coping strategies in keeping with core principle of promoting self-efficacy. The facilitators ended the group sharing by asking participants how they wished to close.

Psychoeducation about stress and coping
One goal of PFA is to promote sense of self-efficacy by providing information on coping (Vernberg et al., 2008). This was accomplished through a psychoeducation session about stress reactions and coping. Psychoeducation about mindfulness as a coping strategy and mindfulness practice were included.

Open-space problem solving
PFA aims to enhance a sense of community efficacy, promote connectedness, and instill hope. An open-space activity was done as part of PFA actions related to providing practical assistance, social supports, and linking with services (Vernberg et al., 2008). Open space assumes that individuals have the capacity to get things done and create their own future when given the freedom and space to do so. Participants set the agenda by identifying topics, issues, or concerns they wished to discuss. Simultaneous small group discussions are held to brainstorm about the chosen topics. Participants are free to join whichever topic they find interesting and can move from one discussion to another. Volunteer facilitators from among participants collect, summarize, and report the results of each small group meeting (Owen, 2008).

Closing activity
The final activity was designed to reinforce the PFA principle of promoting connectedness and instilling hope. Because music is an important part of the Philippine culture, the activity began by asking participants to stand in a circle while asking them to sing a popular inspirational, religious song. As the song was being played, ballers (rubber bracelets) inscribed with the words “rise,” “hope,” “resilience” in the local dialects were
distributed among participants. They were then asked to exchange ballers with members of their group while giving the person a message of affirmation and encouragement. Another inspirational song was played and the group was encouraged to sing along.

This study was designed to investigate the effectiveness of the group-based, mindfulness-informed PFA intervention. Specifically, we asked: first, did the group-based PFA intervention increase participants’ sense of self-efficacy and coping skills from pre- to post-workshop? and second, how did workshop participants evaluate the effectiveness of workshop and its components?

**Method**

**Participants**

Participants were local government employees in the various areas affected by Typhoon Haiyan. A total of 125 participants joined one of the three intervention programs in different locations. Of the 125 participants, 98 consented to participate and had both pre- and post-test data. Respondents were mostly female (65 percent) and married (58 percent). Participants’ ages ranged from 21 to 63 with a mean age of 37 years old. Participants’ PSS scores ranged from 17 to 78, with a mean of 34.5 (SD = 14.29). A total of 47 participants (61 percent) scored below 35, the suggested cutoff score for general population samples and 30 participants (39 percent) scored above the cutoff score indicating significant PSS. When asked to indicate which personal needs required urgent attention, 25 participants (33 percent) indicated both health and safety needs. In all, 21 percent indicated basic needs, followed by work (12 participants, 16 percent) and coping with stress reactions (11 participants, 14 percent).

**Measures**

**Coping skills.** A five-item scale assessed participants’ knowledge and ability to cope with disaster. The items were worded: “I have been able to share my experiences in Haiyan to others,” “I have been able to share my reactions to Typhoon Haiyan to others,” “I understand my reactions to the disaster,” “I understand other people’s reactions to the disaster,” and “I know how to cope with my reactions to the disaster.” Participants were asked the extent to which they agree or disagree using a five-point Likert scale with 1 as “strongly disagree” to 5 “strongly agree.” Internal consistency reliability (Cronbach’s α) was 0.94. Participants were asked to fill out the survey prior to and after the intervention.

**Self-efficacy.** This two-item scale assessed the extent to which participants feel they have the ability to help themselves and others post-disaster. It consisted of two items: “I know how to help my family, friends or colleagues cope with the disaster,” “I know how to help our community cope with the disaster.” Participants were asked the extent to which they agree or disagree using a five-point Likert scale with 1 as “strongly disagree” to 5 “strongly agree.” Internal consistency reliability of the items was 0.93. Participants filled out the scale before and after the intervention.

**Post-traumatic stress symptoms.** The PTSD Checklist-Civilian (PCL-C) was used to assess PSS (Weathers et al., 1993). It consisted of 17 DSM-IV symptoms of PTSD. It was used to screen participants for significant level of PSS at baseline. Participants were asked the extent they were bothered such a symptom using a five-point Likert scale with 1 as “not at all” to 5 “extremely.” Internal consistency reliability (Cronbach’s α) was 0.95. Scores can range from 17 to 85. The suggested cut-off score for the general population was 30-35 (National Center for PTSD, 2014).
**Program evaluation.** An open-ended question asked participants to name the workshop components they found most and least useful. Another question asked them to comment on the most and least useful components.

**Results**
A paired sample t-test was done for all respondents. Results revealed a significant difference between pre- and post-test coping scores \( t(97) = 6.86, p < 0.001 \) and pre- and post-test self-efficacy scores \( t(97) = 8.63, p < 0.001 \) (see Table I).

Because of the small sample size in one location, non-parametric test (Wilcoxon matched pairs signed rank test) was used to compare pre- and post-data per site. Results revealed significant difference in coping and self-efficacy in both Site 1 and 3. There was no significant difference in pre- and post-test coping scores in Site 3 although there was a significant difference in self-efficacy pre- and post-test coping scores. However, it should be noted that Site 3 had a very small sample compared to the other areas (see Table I).

The program evaluation survey asked participants which workshop components they found most and least useful and for comments about the workshop. Participants named the following workshop components as most useful: mindfulness (32, 33 percent), PFA (18, 18 percent), group sharing (18, 18 percent), everything (14, 14 percent), lectures on coping (12, 12 percent), and open space activity (9, 9 percent). Comments about most useful components included: “sharing and mindfulness techniques,” “sharing of experiences and what did the person do to cope with what happened,” “lectures in coping with mental distress after a disaster,” or “re-entry planning, caring for self and others, mindfulness.” There were no responses concerning least useful components. In all, 12 participants wrote that everything was useful, “the whole process is very relevant and useful to our current situation.”

**Discussion**
The current study adapted PFA to be culturally sensitive and mindfulness-informed, in order to address Filipino disaster responders’ needs in the immediate aftermath of Typhoon Haiyan. The results from both quantitative and qualitative data reveal that the intervention significantly increased participants’ coping ability and self-efficacy. In addition, the qualitative comments suggest that participants found the cultural adaptation of group sharing to be one of the most useful workshop components, perhaps because of the benefit of being able to share their experiences of disaster with people who went through the same experience. Thus, the use of a group approach

<table>
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<tr>
<th>Sample size</th>
<th>Pre-coping</th>
<th>Post coping</th>
<th>Sig.</th>
<th>Pre-self-efficacy</th>
<th>Post self-efficacy</th>
<th>Sig.</th>
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<tbody>
<tr>
<td>Site 1</td>
<td>30</td>
<td>4.08</td>
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<td></td>
<td>(0.87)</td>
<td>(0.66)</td>
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<td>(0.86)</td>
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<td></td>
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<td>(0.41)</td>
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<td>(1.48)</td>
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<td>(0.74)</td>
<td>(0.61)</td>
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<td>(0.80)</td>
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<tr>
<td>Total</td>
<td>98</td>
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<td></td>
<td>(0.85)</td>
<td>(0.61)</td>
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<td>(0.89)</td>
<td>(0.69)</td>
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Table I. Pre- and post-mean and (standard deviation) scores
appears to be especially useful in collectivist and interdependent cultures as reported by other authors (Adviento and De Guzman, 2010).

Most participants likewise cited the mindfulness meditation exercises, as experienced within a group setting, as a valuable addition to the group-PFA process. This result is consistent with previous work showing the value of mindfulness in helping disaster responders (Waelde et al., 2008).

Disasters and the many challenges it brings can overwhelm survivors. The results suggest that large group interventions such as Open Space provided opportunities to offer instrumental support to each other, which is a recommended component of PFA that was especially well-addressed by this group-based intervention (Lewis et al., 2013).

However, there are several significant limitations to the study. As in many disaster studies, it was not possible to include a randomized control group in the design (Hobfoll et al., 2007) and only pre- and post-intervention data were collected. To strengthen inferences about the effect of the intervention, future studies involving an active comparison condition should be considered. Another limitation was the lack of follow-up data. Future research may wish to address the limitations of the study by obtaining follow-up data to enable more robust conclusions on impact of the intervention on the self-efficacy and coping of participants.

Limitations notwithstanding, the study results highlights the value of designing a PFA process nuanced on context and culture. Specifically, it reveals how the use of a group-based intervention may be helpful especially in a collectivist culture. At the same time, acknowledging cultural values such as spirituality is an important component to providing psychosocial support for survivors. Mindfulness was found useful both as an initial calming activity as well as a means for helping survivors manage their stress reactions. Finally, the utilization of an open space activity can also be a helpful problem-solving mechanism when done in intact groups, as it enhances not just self-efficacy but also community efficacy among survivors.

The study has important implications for helping disaster survivors. The study demonstrated that adapting PFA to include mindfulness practice and culturally informed elements such as group support was both acceptable and effective for disaster responders. However, guidelines need to be put in place to address and prevent vicarious trauma in the context of groups. Disaster responder training should include components designed to address skills for responding to disaster stress, including mindfulness, coping, and sense of self-efficacy. Beyond basic skills in counseling, training on group facilitation is likewise important for those who will handle group-based interventions. Finally, as suggested by the World Health Organization (2011), psychosocial interventions cannot be done in vacuum. It is thus important to provide integrated solutions and multi-layered supports to holistically address the needs and concerns of survivors.

References
Mindfulness-informed PFA after Typhoon Haiyan


Further reading


About the authors
Dr Regina M. Hechanova, MA, is a Professor of Psychology at the Ateneo de Manila University. She was the past President of the Psychological Association of the Philippines. Dr Regina M. Hechanova is the corresponding author and can be contacted at: rhechanova@ateneo.edu

Dr Pia Anna P. Ramos is a Lecturer in Psychology at the Ateneo de Manila University. She is the Chair of the Mental Health and Psychosocial Support Special Interest Group of the Psychological Association of the Philippines.

Dr Lynn Waelde is a Professor of the Pacific Graduate School of Psychology, Palo Alto University and is Consulting Professor at the Stanford University School of Medicine.