



Mosque as Emergency Shelter in Natural Disaster: Responses and Challenges

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ABSTRACT

Mosque has a pivotal role during the most critical phase in a natural disaster. However, mosque administrators frequently have no good comprehension of the other function of mosques other than a place of worship. When refugees of a natural disaster took shelter in the mosque, the mosque administrators were uncertain between keeping the mosque holiness as the house of God and prioritizing humanity first. This study discussed the responses and challenges of mosque administrators and refugees during making mosques as emergency shelters. This paper applied a qualitative approach to gather responses and challenges experienced by the administrators of Baiturrahim Mosque and a quantitative approach to survey why refugees chose the mosque as shelter. The value of this paper was to describe the different views of the mosque administrators regarding the function of the mosque, including the many challenges faced due to lack of knowledge and experience. Nine reasons why refugees chose mosques as shelters were assessed based on percentage. Refugees were faced with strict norms of decency and ethics from the mosque. Equalization of perceptions among administrators about the function of mosques and education to the community is essential in the mitigation phase. Therefore, we recommend the disaster authority make regulations and standard operating procedures to guide the work and direction of building mosques in disaster-prone locations for future preparation.



Introduction

Victims and survivors of disasters need to be relocated to a safer place. The availability of safe and comfortable temporary shelter can ensure health, promote traumatic recovery, and provide access to food. Lillibridge (1997) explained that shelter unavailability potentially increases mortality on vulnerable older people, children, and victims with severe physical injuries. Low-quality shelters also pose various problems for refugees (Schilderman, 2004). The unavailability of refuge during a disaster in developing countries is caused by limited resources (Arlikatti et al., 2010). At this critical point, disaster victims must optimize the available resources around them to survive. In Indonesia, disasters in several regions have provided information on how mosques played their roles during the disasters (Ashara et al., 2018; Husa & Damayanti, 2019). The utilization of mosques during disasters is also demonstrated in several countries (Cheema, 2012; Haraty et al., 2018). Utaberta and Asif (2017) emphasized that mosque is very appropriate to be used as a shelter according to IOM (International Organization Migration) and FEMA (Federal Emergency Management Agency) standards.

Mosques had served humans in dealing with disasters long before the modern concept of the disaster was found. Unfortunately, this practice has not been broadly documented yet (Cheema et al., 2014) and has been generally underestimated in disaster studies for a long time (Candland, 2000). The majority of the published studies seem to focus only on three areas. First, the dominant research explores the role of mosques, especially in the emergency response phase (Cheema et al., 2014; Haraty et al., 2018; IRI et al., 2011; Kotani et al., 2021; Mohit et al., 2014; Utaberta & Rahayu, 2016). The mosque's assistance is targeted at Muslims only but is open to all adherents of the affected religions. Second, the formulation of the readiness of mosques in disaster-prone areas, including exterior and interior designs (Hadi & Hadiguna,

2016; Putrie et al., 2021). Third, the evaluation of the role of mosques as shelters (Asif et al., 2016; Utaberta & Asif, 2017). These three areas place mosques as supporter units at the most critical phase in disasters at the regional level. Previous studies are most likely to have missed a focus about exploring the preferences of disaster victims or refugees in choosing a mosque as a place of refuge along with the challenges during their stay there.

This paper aimed to fill previous studies' gaps by analysing why mosques were chosen as an emergency shelter. The question was answered through three crucial elements. First, observing the perception of mosque administrators towards mosques as emergency shelters. Second, describing the results of a survey on the reasons for disaster victims to take shelter in mosques. Third, examining the challenges faced by mosque administrators and disaster victims in accommodating themselves to a set of rules prevailed in mosques. This study focuses on the case of the gathering of refugees at the Baiturrahim Mosque in Bengkulu City, Indonesia, during the flood disaster. Victims may choose mosques as emergency shelters not only because they do not have other preferences but also because of proximity, security, comfort, and supporting facilities. This study argues that the functionalization of the mosque must follow the needs of the surrounding community. Consideration of this argument allows the management or the community to function the mosque outside of worship. This research is urgently needed to be studied to strengthen the evidence that mosques should act based on community needs.

Materials and Methods

Types of Data

Responses and challenges faced by refugees in mosques are explained through qualitative methods that rely on primary and secondary data. Qualitative helps researchers to explore a lot of data

from observations, interviews, documentation, and online media. These methods have fulfilled the need for primary data related to important moments surrounding the flood, the gathering of refugees in the mosque, differences in views among administrators, division of tasks and spaces, responses and challenges faced by refugees while living in this emergency shelter. Then, secondary data consists of flood documentation, mosque organizational structure, and news and online videos.

Targeted Mosque

This paper focused on the role of the Baiturrahim Mosque as a shelter. The Mosque is located in Semarang Village, Sungai Serut District, Bengkulu City, Indonesia. The mosque was considered essential to be documented for some scientific reasons: It was the only mosque that functions as a shelter when other mosques were submerged in water; it had spacious area and adequate facilities; its administrators acted immediately when the government was unable to access the location, and there were so much to learn from the first evacuation experienced by the mosque administrators and refugees. Baiturrahim Mosque was the largest mosque in Semarang Village which can accommodate up to 500 worshipers. The mosque had a land area of 42 x 34 square meters, which included the main mosque building, office, multipurpose room, ablution area, toilet, bathroom, warehouse, garden, and parking area. The model of the construction of the mosque had a religious perspective so that from the beginning, there were no facilities intended to support refugees of disasters. However, because the mosque was located in highland with an extended area and good facilities, it was appropriate for an emergency shelter during a disaster.



FIGURE 1. Map of Indonesia Indicating the Location of Bengkulu.
 Source: https://commons.wikimedia.org/wiki/File:Indonesia_2002_CIA_map.jpg

Participants

Baiturrahim Mosque administrators who supported various needs during the disaster and all refugees were the research population. Although there were thirty-eight people in the administration structure, only seventeen people were actively involved. They consisted of three primary administrators: the chairman, secretary, and treasurer; an imam; three coordinators for social, development, and women's empowerment; and ten other members. Based on the track records obtained from the mosque secretary, there were one hundred and two refugees. The age and gender of the refugees are provided in table 1. Five refugees were selected for an interview, and seventy-eight from the age range above 16 years were expected to fill out the survey forms.

Sn	Age Range of Refugees	Gender	
		Male	Female
1	0-15	7	12
2	16-25	4	9
3	25-35	7	8
4	36-45	9	14
5	> 46	13	19

TABLE 1. Data of refugee respondents by age and gender. *Source:* Primary Data, 2019.

Procedure of Data Collection

The researcher used open-ended questions to interview ten mosque administrators: the chairman, secretary, treasurer, coordinator of social issues and women's empowerment, and four other members. We processed interview data through the stages of transcription and reduction by searching for keywords and categorizing keywords. Observations were made the day after the disaster due to the disconnection of the road access to the location. We wrote all the observation notes on the worksheet. Videos on YouTube and online news are sources of documentation. Furthermore, a paper containing nine items of choice to the refugees about why they chose the mosque as a place of refuge was distributed. This choice was extracted from the results of previous interviews with other refugees. These results are tabulated, and then presented in a percentage format. These four procedures not only ensure that each data is valid but also meet the triangulation test. Finally, each data is categorized based on the three objectives of this study.

Results

Results related to objective one

The findings for the first purpose of revealing the perception of mosque administrators towards mosques as emergency shelters were analysed through a series of observations, documentation, and in-depth interview. It rained for 14 hours in all areas of Bengkulu City on 26 - 27 April 2019; from 01.30 p.m. to 03.00 a.m. Rain with moderate to high intensity submerged the city in 28 locations. The flood was the worst one in the last 30 years. Based on our analysis, there were four leading causes of the flood: there was a land alteration around the headwater streams of Serut River, there was narrowing and silting of the river, the road level was higher than the house level, and the region was partly a swamp area. Figure 2 shows the flow of the Serut River that failed to accommodate the water volume that finally flooded the residents' housing.



FIGURE 2. Serut river overflows the resident area. *Source:* www.youtube.com.

At first, residents were unaware of the puddles that filled the small ditches in front of their houses. It was indicated by the normal night activities, such as watching television, playing online games, studying, and chatting with family members. The situation

changed drastically when chain messages along with a picture of the overflowing Serut River were sent to the community through a chat application. The information triggered panic among the people, where they began to check the outsides of their homes, communicate with each other, and move their electronic equipment to higher places. During the high-intensity rain, at 06.00 p.m., water began to overflow people's homes. Emotionally, one of our respondents recounted:

This is entirely unexpected and has never happened before in my entire life. I have entrusted my wife and children to other residents to evacuate. I don't know where they are now. I have to look after the house. The water quickly reached the roof, and I found myself up there. (I) only wore soccer shorts. That's what I remember. I almost gave up hope. I fought for them. I screamed for help. (Finally) some people heard me. They helped me use a jerry can as a life vest... Around 02.00 a.m. I was reunited with my wife and children at the mosque

In a critical situation, several refugees took the initiative to gather in the courtyard of the Baiturrahim Mosque. In a short time, other refugees arrived there because the level of the mosque was safe from the flood and it had supporting facilities. Figures 3 show that the first moment when refugees began to gather at the mosque's courtyard. At the same time, the administrators had not decided yet regarding what to do in response to the refugees. There was a delay in decision-making because there were concerns about disrupting worship routines, noise, and the mosque as a holy place. The mosque administrators were afraid of the possibility of refugees not having good manners, such as not performing ablution (not in divine conditions), not wearing appropriate clothes, and not keeping the main area clean. So it was judged that it would only trigger even more tremendous anger of God. Imam of the Baiturrahim Mosque said:

During the time of Maghrib's prayer, there were no refugees. Just before Isha's prayer, they started to come. After Isha's prayer, the courtyard of the mosque was full of people. There were arguments

among the mosque administrators because it is not a place for refugees, and they may misbehave later in the mosque. The flood occurs because God is angry with human behavior. Do you want to add to it by polluting the mosque?



FIGURE 3. The refugees stay at the mosque. *Source:* Researchers' documentation, 2019.

Meanwhile, some administrators, especially from the social division, were trying to speak out that the mosque should care more about the environment. We collected several reasons to put forward. First, the refugees had occupied the mosque's courtyard before the administrators permitted them, so it was unethical to expel them out. Second, refugees were residents around the mosque who had good relationships with the administrators and pilgrims. Third, the condition of the mosque building was very suitable for shelter because, during the heavy rain, it was not possible to set up emergency tents. Fourth, Islam paid great attention to humanity and promoted mutual assistance. Fifth, funding for disaster victims could be collected independently from the mosque fund, pilgrims, and the people living near the mosque. The social division coordinator said:

Personally, I may not be an expert on the Quran. But indeed, Islam teaches us to help each other. That's the main reason I mentioned

earlier. Moreover, these refugees are our brothers, (and) there are still blood ties from our ancestors. If you say it's a debate, it's not because I also understand the restlessness of other administrators for fear of the mosque getting dirty. It takes a division of space and strict rules so that everything can be well-ordered. We did that well.

Baiturrahim Mosque had functioned as a disaster shelter. However, we observed that the management did not know that historically, mosques had long been used as a place for humanity before the concept of disaster mitigation was formulated. The management's limited knowledge was formed since they only learned several verses of the Qur'an about mosques as places of worship, religious lectures, and daily experiences. This was reflected in the activities at the Baiturrahim Mosque, such as five daily worship routines, Friday lectures, special lectures for women, lectures for joint congregations, and recitation of Surah Yasin on Thursday nights. The activities related to the community were compensation for the families of pilgrims who died, donations for orphans, and scholarship assistance for the poor. Despite having a social vision, all programs were conducted outside the mosque.

Results Findings Related to Objective Two

The second objective was answered using the results of a survey study, and a presentation analysis was conducted to reveal various reasons for the refugees taking shelter in mosques. While Baiturrahim mosque administrators were deciding, the victim knew earlier that the mosque could be used during a flood disaster. Three factors built up the knowledge of the victims. First, disasters in many areas in Indonesia were a reference where mosques were unaffected while other buildings were destroyed. The label of the mosque as belonging to the community makes it easy to get inside, and people have been congregating for some time. Second, the mosque had several facilities that supported the victims to survive in the most critical phase of the

disaster. Shelter from rain and heat, access to clean water, bedding, electricity supply, and side food was considered sufficient while other assistance had yet to arrive. Third, Muslims viewed that the mosque as the house of God in the world. Mosques were not affected by the flood, strengthening the belief that God would not destroy and pollute his own home. Taking refuge in it means protecting oneself from being affected by aftershocks.

Table 2 describes in a detailed way the various reasons for the disaster victims to access Baiturrahim Mosque. As many as nine lists of reasons were extracted from the results of open interviews and observations. The views of the victims were studied. Then, it is presented in a list of questions that are answered through a checklist. Participants were allowed to choose more than one reason according to their experience. Seventy-eight refugees were expected to fill out this list. Only sixty-six filled out the forms, three were unwilling for traumatic reasons, and nine were unsuccessful because they were not present.

Sn	Types of Reasons	% Decision
1	The comfort and safety of the mosque room	37
2	Attachment to the mosque	58
3	The mosque is the safest place as the house of God	87
4	Spacious parking area	9
5	Kinship between victims	49
6	Following the directions of local authorities	11
7	Following other refugees	69
8	Abundant food accessibility	71
9	Compulsion / having no other alternative to shelter	7

TABLE 2. Reasons for Flood Refugees Take Shelter in Mosques
Source: Primary Data, 2019.

It was interesting because, in a disaster situation, most of the refugees believed that the mosque was the safest place as the house

of God. This belief is not influenced by the level of faith that can be seen in the behavior of the refugees. Some refugees actively worship and vice versa. 58% of the active members of Baiturrahim Mosque had shown their attachment either before or after the disaster. Although there were 7% who had no other choice for shelter, they still believed that passing away in the mosque during a disaster was a noble death.

The local leaders gave a slight hint when the water started to flood the house because they were focused on evacuating their family members. Only 11% of residents claimed to have heard direction to prioritize the evacuation of women and children to higher ground. The contribution of local authorities was identified a few hours after the rain stopped through the evacuation of residents trapped on the roofs of houses. Thus, 69% of refugees stated that they only followed the calls of other refugees or followed the advice of the head of the family. The willingness to follow directions and stay in the mosque during the disaster was strengthened by the kinship ties between some of the residents of the same lineage. There were mosque administrators and disaster relief managers who advised all their relatives to stay in the mosque.

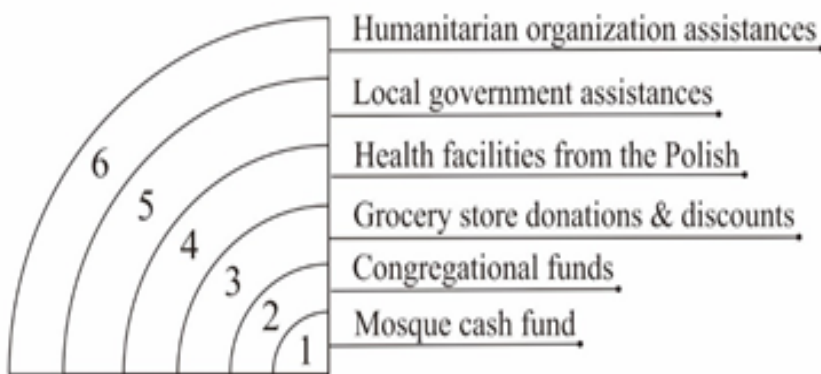


FIGURE 4. Source of the mosque's funding as an emergency shelter. *Source:* Primary Data, 2019.

The basis for kinship decisions is 49%. Some residents did not see the emergency side, such as considering a large parking area at the mosque so that their vehicles could be safe (9%). Comfort and security are also a factor of 37%. During the flood, the electricity supply was cut off, and the mosque continued to use power via generators. Lights, fans, chargers for cellphones, dispensers could be accessed for 24 hours. The advantages of staying at the mosque were also included quick access to proper and healthy food, while the government and private sector were still looking for a place to set up an emergency kitchen. The fast access to food had invited other refugees to settle by 71%.

Findings of the objective three

To obtain the data for the third finding about the challenges faced by mosque administrators and disaster victims in adapting to mosques during the flood, responses were collected through in-depth interviews, which were explained in the form of categorization. The mosque administrators faced various challenges during the floods because they did not have the experience and knowledge as a rescue team. All work was done jointly, and priority was given to the issues needed the most. The challenges of the management were as follows. First, after the mosque was opened for disaster victims, the provision of food was prioritized. The mosque's all-male administrators did not have the skills to cook in large public kitchens. Active female mosque members who were not affected by the disaster were asked to handle all the needs in the shared kitchen. Second, the mosque's cash funds were used to buy food ingredients. To avoid the use of excessive mosque funds, the administrators were looking for new funding sources. We listed the order of funding in Fig. 3 based on the origin of funding received. The primary source was from the mosque's cash fund, and then the management motivated the mosque's prominent

congregations from the rich to contribute to charity. The grocery store also contributed at the beginning of the disaster in consumables and giving discounts on every purchase. The police set up health posts, and the government and charities provided food packages and daily clothes.

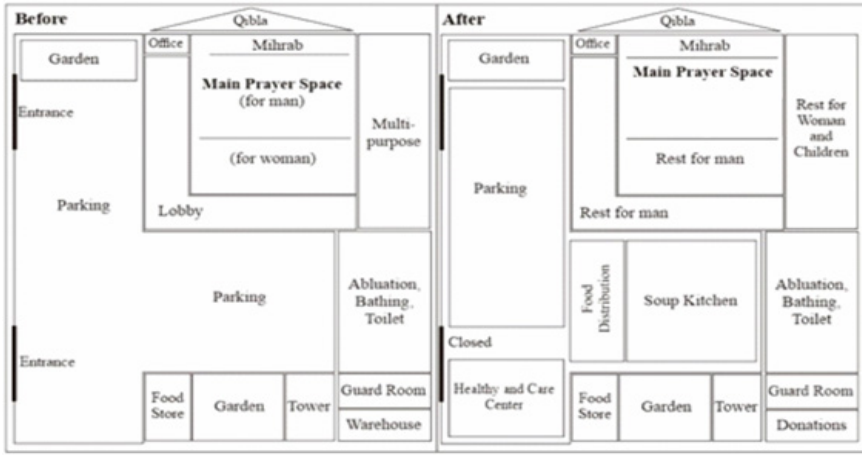


FIGURE 5. Shifting the function of mosques as emergency shelters. *Source:* Primary Data, 2019.

The third challenge was proportionally, and the management had shifted several functions in the mosque space without disarranging the main area as a place of worship. Figure 5 shows only the prayer room for women had been converted into a resting site for men. Most of the parking area was used for soup kitchens, food distribution, and health facilities. The courtyard functioned as a multipurpose place: a place to eat, chat, take a break, and various activities to keep everyone happy. Women and children were given a special room. Fourth, mosque administrators coordinated with various parties who provided unconditional assistance. Fast food, instant noodles, and staples were the most donated. Mosque administrators only needed to receive and distribute. This required good management because it avoided the accumulation of materials in the warehouse

and maintained the good name of the mosque administrators and *imam*. The fifth was educating the refugees to worship and maintain an attitude while in the mosque. The reality was that not all refugees were devout Muslims and understood religious norms. The mosque administrators had rebuked the men who slept in the first row for prayer, the women who removed hijab in the mosque, and the children who ran around in the main prayer hall. Taking refuge in the mosque provided an opportunity for every refugee to get closer to Allah through worship. However, not everyone took this opportunity. Even for congregational prayers, especially at dawn, men were still seen sleeping. We also received reports that refugees intentionally left the mosque before the prayers took place and returned after the prayers were over.

Refugees adjust their lifestyles at home to the bound rules of the mosque. For refugees accustomed to Islamic regulations at home, the adjustment did not make it difficult for them. On the other hand, it was complicated for those who were not used to the daily cultures of Islam. Some of the challenges refugees faced while staying in the mosque were: First, they had to always wear clothes covering their *aurat*. Women were always required to wear a headscarf and full-body clothes. It was easier for men because the only thing that must be covered was the navel to the knees. We asked for the views of a young woman:

At home, I usually wear hot pants or something casual. Sometimes I just wore a house dress depending on the weather conditions. If I wanted to go out of the house, I always wore a hijab, and if I was just around the house, I just needed some modest dress. It was conditional. When I was in the mosque, it was difficult for me. I have to wear a hijab even when I sleep, and this is weird. I can take off my hijab when I go to the bathroom. That is the mosque, and there is no other choice.

Second, the separation of space between men and women restricted family members from gathering. Separation aimed to avoid the possibility of evil deeds. In addition, the management understood

that Islam did not encourage unmarried men and women to have a lot of time to look at each other. The refugees admitted that this restriction rule prolonged the duration of disaster trauma because children, especially girls, did not get much support and awareness from their fathers. The mosque did not have a special room for families. The time available was only in the morning to evening. The third challenge was the obligation to perform congregational prayers for men. Islam encourages men to pray in the mosque, not at home. Mosque administrators used this opportunity to get used to men praying together. Fajr prayer was the most difficult to perform because it took an effort to wake them up. We witnessed very few people who got up at that time without force. The mosque management had to warn them multiple times. At other times, refugees deliberately went out during prayers, and then they returned to the mosque when the prayers were finished. Other challenges were asking refugees to renew their ablution at the mosque, prohibiting them from saying bad and unuseful words, and reminding them always to keep their ethics.

Discussion

Discussion related to objective one

There were different perspectives in viewing the function of the mosque as an emergency shelter during a natural disaster among the mosque administrators. The *Imam* of the mosque, a person who understood religion better, seemed hesitant to open the mosque as a place of refuge. This was due to the view: the mosque was a house of God that must be kept clean, so the mosque should function as a place of regular worship and other supporting worship. Moreover, there were fears that the refugees would not refrain from evil deeds while taking refuge. Disasters have been interpreted as God's anger towards humans so that a polluting mosque would increase God's

wrath. Other administrators believed that the refugees spontaneously identified the mosque as a safe, comfortable place with available facilities and unreachable by a disaster. When the situation got out of control, disaster victims thought God couldn't possibly damage the mosque. This difference of views showed that there was no complete knowledge that mosques could function as alternative shelters

The limited knowledge possessed by mosque administrators reflected that Islamic learning about the functionalization of mosques was limited. Islamic learning through the lecture method was only focused on the matters of aqidah, worship, sharia, morals, and faith in destiny. It was very rare for a religious leader to explain humanitarian, political, cultural, and even disaster issues in the mosque. This in turn formed the mindset of the people that the mosque was really a place for increasing faith in Allah and was not done outside of it. The functionalization of the Prophet's Mosque in the era of the Prophet Muhammad PBUH was very broad: a place for courts, formulating war strategies, a place to train troops at the mosque yard, a community health center, and a place for prisoners of war (Rifa'i, 2016; Shihab, 1999). Prophet Muhammad PBUH managed the mosque based on the needs of the times and the surrounding community. The neglect of knowledge outside of worship and the lack of synergy between the mosque and the needs of the community minimized the opportunities for the use of mosques as emergency shelters.

Lack of knowledge about the functionalization of mosques in supporting disaster emergency response work was caused by the dwarfing of Islamic teachings and the loss of sense of community. The teachings of Islam in Indonesian mosques were dominantly prioritizing the explanation of the human relationship with God. Humanity issues such as poverty, lack of job opportunities, conflicts, and other emergencies were not considered as issues needed to be

resolved at the mosque. Fahmi (2018) stated that very few mosques set aside funds to help the community. The mosque as a holy place had not been understood as a place to carry out sacred tasks. Solving the problem of the community around the mosque was a good thing that needed to discuss together. Mosque administrators could contribute in terms of financial resources, facilities, or ideas even if only in the spiritual realm. Thus, the participation of mosques in the community was another way of explaining that Islamic institutions care about humanity.

Scientific documents that could explain the role of mosques in disaster situations were admittedly limited by several scholars including: Cheema et al., (2014), Candland (2000), and Syarief et al., (2020). Limited studies were compounded by access to difficult-to-understand documents and language. On the other hand, mosque administrators in Indonesia had diverse educational backgrounds and were generally elderly men. Recognizing this weakness, several action plans needed to be followed up. First, it took a change of mindset about the vision of the mosque based on the needs of the community. When it was known that an area was in a disaster zone, the mosque must prepare everything for it, including providing a hall, ready-to-use tents, social funds, and the education of the congregation. Second, there was a need for legislation that could legitimize that mosques were the most important part in disaster mitigation. Third, regulations can become a working basis for disaster authorities, in Indonesia called BPBD (regional disaster management agency), to help mosque administrators formulate mitigation maps and patterns of education for congregation.

Discussion related to objective two

Immediately after a disaster occurred, the most important survival strategy was to find a safe place from any possible aftershocks.

It turned out that the victims of the disaster chose the mosque as a place of refuge not only for safety and comfort, but also for reasons of belief. There was a belief that the best thing to do during a disaster was to take refuge in the house of God. When aftershocks came, the inevitable fate of death could end in good way. In the Qur'an it has been said that "Indeed the mosques belong to Allah ..." (Q.S al-Jin: 18). In a hadith narrated by Muslim, Prophet Muhammad PBUH said "the best place on earth is the mosque and the worst place is the market" (Usman, 2015). The word mosque is mentioned 28 times in the Qur'an. Its connotation is more often understood as a place that must be prospered and built well (see: QS at-Taubah: 18; an-Nur: 36-38), and protected from bad things (see: QS At-Taubah 109-110). This reinforced the Muslim view that Allah protected his house, so taking refuge in it means protecting oneself from bad possibilities. Thus, the existence of religious doctrines and the urgency to survive in disaster conditions were the determining factors for choosing mosques as emergency shelters.

Equally important, the role of kinship ties outside the nuclear family turned out to be a key factor in facilitating access to protection. Even though communities played a role in disasters (Cheema et al., 2014; Lichterman, 2000), this still did not guarantee the continuity. Those who were still relatives were given more special attention than people who were not very familiar with, even to their neighbors. This study supported Patterson et al. (2010) that communities could act be exclusively against members of non-communities. Communities that had strong social capital were an advantage in dealing with disasters based on previous information: Dynes (2002), Yoshihide and Rebecca (2004), Zurita et al., (2018). However, we believed social capital could take effect after going through the most critical phase. Various aids in evacuation areas, togetherness for psychological recovery after a disaster, including rebuilding houses having been destroyed were

forms of social capital after an emergency. The efforts to save souls among the relatives may finally be more exclusive.

Discussion related to objective three

The administrators and refugees experienced various challenges while at the mosque. The administrators had to divide the space according to the needs of the refugees, provide a public kitchen and create a cooking team, manage the incoming aids, and educate the refugees while in the mosque environment. Refugees should adapt to conditions that were all orderly and ethical: wearing appropriate clothes, speaking good things only, and not making a family gathering during the event.

These multiple challenges indicated that the government seriously underestimated the role of mosques. BPBD has not made mosques strategic partners. There had not been a mitigation road map or operational procedure in disaster-prone areas that involved mosques as an essential component, either as disaster education, the center of information during the event of a disaster, or preparation as a shelter for refugees. BPBD tended to focus on mitigating areas with a high level of threat, such as earthquakes, tsunamis, volcanic eruptions, and extreme weather. Unpredictable disasters tended to be handled through emergency response. This was sometimes considered reasonable because BPBD had limited human resources, budget, facilities, accommodation, and information. This limitation could be covered by a pattern of collaboration with public institutions. Thus, it was vital to involve mosques in disaster mitigation.

In Muslim tradition, the mosque was a center of information among the community. Important information was provided to the community, such as parenting, fire information, death announcement, village clean-up activities, and many more. This was an opportunity for the government to expand knowledge and prepare for disaster

response. So the government needs to make a regulation and standard operating procedure (SOP) that places mosques as a disaster response unit. In the SOP, mitigation measures must be detailed to facilitate the work of the management to synergize disaster programs, including the direction of mosque construction.

Conclusion

This study demonstrated that when mosques were used as shelters without long-term preparation, various conflicts could occur either among the mosque administrators or among administrators and refugees. In the most critical situation where victims of the disaster were severely in need of shelter, mosque administrators still needed confirmation of the sanctity of the house of God or humanity. This was due to the lack of knowledge and experience about the functionalization of mosques outside of worship. While Qur'an legitimized the mosque as a place of worship, the mosque administrators had not understood the practice of the Prophet Muhammad PBUH that functioned mosques according to the needs of the local community. Refugees who previously did not receive disaster education tend to find it challenging to adjust to ethics and politeness in mosques. At the same time, this article also confirmed previous studies that disaster authorities underestimated the role of the mosque as a unit of disaster mitigation, even though many such practices have emerged and scientific documentation has been corroborated.

This article recommended the disaster authorities make regulations and standard operating procedures for mosque-based disaster mitigation or religious institutions. Disaster authorities need to collaborate with them, such as inviting mosque administrators to explain potential disasters for humanity and disseminating disaster directions and integrated pieces of training. Furthermore, this article

also reminds the importance of mosque administrators to balance divine and human needs. Mosques in disaster zones need to make a master plan for the construction of a mosque that takes into account the protection space, especially for women and children, provides special funds, and establishes cooperation with basic food shops around the mosque.

Even though this study fulfilled the gaps of previous studies on establishing a mosque as a shelter and its challenges, it was still limited to one mosque and relied on descriptive analysis. Therefore, studies with a broader scale are needed. Future studies can also highlight best practices on responding to mosques that have been prepared earlier in the face of natural disasters. The challenges studied in this research were still too broad, so it is necessary to focus on the challenges faced by women and children. They are refugees who may find it challenging to find comfort while taking refuge in the mosque.

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Author's declaration

Authors' contributions and responsibilities

The authors made substantial contributions to the conception and design of the study. The authors took responsibility for data analysis, interpretation, and discussion of results. The authors read and approved the final manuscript.

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Availability of data and materials

All data are available from the authors

Competing interests

The authors declare no competing interest.

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