

Risk Communication for Earthquake Mitigation in Indonesian Women's Prison: Case Study at Lapas Perempuan Kelas IIB Yogyakarta

Halimatu Sa'diah, Zainuddin Muda Z. Monggilo

Department of Communication, Universitas Gadjah Mada

Email: sasadiyah15@gmail.com

Received 11-05-2022; Revised on 12-06-2022, Accepted 27-06-2022

How to Cited: Sa'diah, H. & Monggilo, ZMZ. (2022). Risk Communication for Earthquake Mitigation in Indonesian Women's Prison: Case Study at Lapas Perempuan Kelas IIB Yogyakarta. *Ultimacomm: Jurnal Ilmu Komunikasi* 14(1).doi: 10.31937/ultimacomm.v14i1.2589

Abstract

Women are part of the vulnerable group and are at risk of becoming victims of disasters such as earthquakes due to their lack of knowledge and skill. Furthermore, their risk of disaster hazards will increase if they have prisoner status. They lack not only knowledge and skill in mitigation but also face the challenge of multi-layered security in prison, which limits their movement. Another problem is that some of them also have limited access to information sources related to disaster management. Therefore, earthquake mitigation must be considered an essential thing in the prison system to prepare women prisoners to deal with ongoing earthquakes. However, several women's prisons in Indonesia still face disaster management challenges, including Lapas Perempuan Kelas IIB Yogyakarta, due to their lack of human resources and facilities. The research elaborated the Protective Action Decision Model (PADM) through operational analysis using a classical communication model consisting of source, channel, message, receiver, effect, and feedback. A classical communication model is used to explain the implementation of earthquake mitigation for women prisoners at Lapas Perempuan Kelas IIB Yogyakarta. Data were collected by observation, interviews, and document studies. Meanwhile, this research was conducted with a case study method. This research found that Lapas Perempuan Kelas IIB Yogyakarta has implemented earthquake mitigation but needs to be developed to adapt to prison dynamics. These findings return to a risk communication concept as an applied discipline geared toward promoting long-term hazard adjustments such as mitigation. Risk communication is complex and covers the entire communication process. This research emphasises the importance of earthquake mitigation and its sustainable development in Indonesian women's prisons.

Keywords: risk communication; mitigation; women; Protective Action Decision Model

INTRODUCTION

Located in the Pacific Ring of Fire and three confluence tectonic plates, Indonesia is one of the most disaster-prone countries in Southeast Asia (Simm, 2018). Three confluence tectonic plates caused Indonesia to be disaster-prone, such as earthquake, which often occurs in Indonesia. Based on National Disaster Management Plan 2010-2014, three confluence tectonic plates caused Indonesia's islands to experience frequent

earthquakes, especially Java Island. There are three categories of disaster hazards based on the damage afterwards: severe, moderate, and low. The most severe is an earthquake, which has massive damage afterwards neither to humans nor to the environment. Earthquake is a geological disaster because it occurs on the earth's surface. From earthquake events in Indonesia, such as Yogyakarta's earthquake in 2006, Padang's earthquake in 2009, and Palu's earthquake in 2018, women became the majority of the victim. When a tsunami hit Aceh on December 26, 2004, data showed that 55% - 70% of victims who died were women (Islam, 2019).

Women are the majority of victims of disasters due to their lack of knowledge and skill in mitigation. Women are part of the vulnerable group because in certain circumstances owing to their physical characteristics and specific needs (International Committee of The Red Cross, 2007). Based on The National Disaster Management Authority (also known as Badan Nasional Penanggulangan Bencana - BNPB), in 2019, women have a 14 times higher risk of disaster hazards than men. The traditional belief is that disasters affect men and women equally because disasters do not discriminate between gender. However, disasters affect women and men differently. Gender roles in society affect them differently, both physically and socially. Women are often less influential because of gender inequality and powerlessness. Women are excluded in some decision-making processes, incredibly high-level public ones (Singh, 2010).

Furthermore, their risk of disaster hazards will increase if they have prisoner status. They not only lack knowledge and skill in mitigation but have to face the challenge of multi-layered security in prison, which also limits their movement. The number of women prisoners in Indonesia increases with the increase of Indonesian exposure to disaster hazards. Nevertheless, women prisoners are still the smallest part of the general prison population in the world (United Nations Office on Drugs, 2014). Most prisoners at Lapas Perempuan Kelas IIB Yogyakarta are from a low education background and have enough education, neither primary education nor disaster management. Many women involved in criminal activities come from marginalised groups who do not prioritise education and believe that women's roles are determined by gender, religion and stereotyped perceptions regarding the role of women in society (United Nations Office on Drugs, 2014).

Low education background caused their limited access to the information source. Another problem is that human resources in prison also do not have enough capacity to give education related to disaster management and minimal program provided for it. As one of prison in Indonesia, Lapas Perempuan Kelas IIB Yogyakarta is still facing those challenges. Only some prison staff has received disaster education. This can be an important note for the government because crucial systems such as prisons are more likely out of detailed attention in disaster management. Even though the government gives much work to The National Disaster Management Authority in Indonesia, if each government institution and human resources inside do not have its capacity, it will only waste time.

Previously, the government has formulated regulations related to disaster management in Indonesia. As one of the government institutions, Lapas Perempuan Kelas IIB Yogyakarta must follow those regulations. Lapas Perempuan Kelas IIB Yogyakarta was a division of Lapas Kelas IIA Yogyakarta and has been actively operating since January 2017. There was only one prison within Regional Office of Ministry of Justice (also known as Kantor Wilayah Kementerian Hukum dan HAM – KANWIL KUMHAM D.I. Yogyakarta). In 2019, after approximately three years of operation, Lapas Perempuan Kelas IIB Yogyakarta received an office building construction from the national priority budget. The new buildings were then officially built in July 2019. The construction of Lapas Perempuan Kelas IIB Yogyakarta in Gunung Kidul Regency had adapted to prison revitalisation framework. Thus, new buildings are expected to support work operations and the prison system. Around April 2021, Lapas Perempuan Kelas IIB Yogyakarta officially moved from Yogyakarta City to Gunung Kidul Regency.

Minister first delivered the Prison system in Indonesia of Justice in 1962. The prison system is not only to conduct sentences but also to return prisoners to society. Prison is a technical implementing unit directly responsible for heading KANWIL KUMHAM D.I Yogyakarta women's prisoner population is increasing faster than men's prisoners (United Nations Office on Drugs and, 2014). Women prisoner is still the smallest part of the general prison population in Indonesia and continues to increase in the line prison population as a whole. The Prison system in Indonesia is classified into four classes such as Class I (also known as Lapas Kelas I), IIA (also known as Lapas Kelas IIA), IIB (also known as Lapas Kelas IIB), and III (also known as Lapas Kelas III). Lapas Kelas IIB such as Lapas Perempuan Kelas IIB Yogyakarta has 250 prisoners maximum capacity and is located at district level.

Related to disaster management, Lapas Perempuan Kelas IIB Yogyakarta has been implements mitigation as safety procedure based on Law No 17/2018 (also known as Peraturan Presiden Nomor 17 Tahun 2018) and SOP No AS.220.OT.02.02.201/2016 (also known as SOP Nomor AS.220.OT.02.02.201 27 April 2016). Mitigation concepts are general, as it is regulated and can be applied in different disasters. However, it needed to make it specifically because each disaster, such as an earthquake, needs different safety measurements. Earthquake mitigation is directly pointed out to deal with ongoing earthquakes. When an earthquake occurs in prison, everyone has their urgency to mitigate it. Take a lesson from the 7.4 Richter Scale Palu's earthquake on September 28, 2018; prisoners mitigate themselves. Both staff and prisoners had their urgency to mitigate and have to escape from prison. Based on the Directorate General of Corrections Indonesia (also known as Direktorat Jenderal Pemasyarakatan Indonesia), on October 1, 2018, 1,425 prisoners escaped Palu's prison (Ninis, 2018). The multi-layered security also worsened the situation during an earthquake in prison. Some prisoners left behind their cells and did not have a chance to mitigate when earthquakes hit Palu.

Lapas Perempuan Kelas IIB Yogyakarta has multi-layered security as a women's prison, but the population is not too crowded. Multi-layered security restricts women prisoners' movements, and they must first get permission from prison staff to get out of their cells.

Based on the Indonesia prison database on July 2021, there are 116 women prisoners at Lapas Perempuan Kelas IIB Yogyakarta. However, Lapas Perempuan Kelas IIB Yogyakarta located in D.I Yogyakarta and it has a varied distribution of earthquake risk. There are 2.575.521 people at risk of being exposed to earthquakes (Badan Nasional Penanggulangan Bencana, 2021). Take a lesson on May 27, 2006, after a 5.9 Richter Scale earthquake, the total death that hit D.I Yogyakarta was about 6.234, and 67.000 houses were rased to the ground. Earthquakes damaged more than 72.000 houses. Therefore, earthquake mitigation is essential for women prisoners at Lapas Perempuan Kelas IIB Yogyakarta to deal with ongoing earthquakes. Based on risk communication concepts, earthquake mitigation is all preparedness efforts to deal with hazards and reduce risks.

Risk communication aims to inform the public about future hazards and associated hazards so that the public can take action to reduce risks (Dufty, 2020). Risk communication tries to build protective actions to deal with ongoing disaster hazards. Through this research, the authors explain the applied communication, Protective Action Decision Model (PADM) for sustainable earthquake mitigation development for women prisoners at Lapas Perempuan Kelas IIB Yogyakarta. Based to Lindell & Perry (2012), the Protective Action Decision Model (PADM) is a multistage model to find out public responses to disaster hazards such as an earthquake (Lindell & Perry, 2012); (LibreTexts, 2020). The Protective Action Decision Model (PADM) has been applied to three fields in risk communication programs. Risk communication promotes long-term hazard adjustments such as mitigation, emergency preparedness, and insurance (Lindell & Perry, 2012); (LibreTexts, 2020). Previous basic research of the Protective Action Decision Model (PADM) has led to communities with ethnic minorities. Meanwhile, based on Protective Action Decision Model (PADM) for Developing Community Risk Communication Programs, the Protective Action Decision Model (PADM) is intended for a risk communication program developed to deal with ongoing disaster hazards.

The latest version of the Protective Action Decision Model (PADM) integrates information delivery from social and environmental cues through communication channels to the public. Stakeholders are responsible for risk communication and disseminating hazardous information that threatens the public. Furthermore, every decision is always preceded by a pre-decisional process influenced by environmental cues, social context, information source, information channel, message content, and receiver characteristics. The Protective Action Decision Model (PADM) influences individual adoption of protective measures against natural disasters such as earthquakes. The five functions that must be handled for a risk communication program development are strategic analysis, operational analysis, resource mobilisation, program development, and program implementation (Lindell & Perry, 2012); (LibreTexts, 2020). The research elaborated further on the Protective Action Decision Model (PADM) application through operational analysis using a classical communication model.

The operational analysis identifies available resources using a classic communication model, including source, channel, message, receiver, effect, and feedback. A classical communication model is used in this research to explain the implementation of

earthquake mitigation at Lapas Perempuan Kelas IIB Yogyakarta. Based on a classic communication model, the source can be defined as a root of risk communication. In this research, sources consist of others who can transmit hazardous information and protective measures information, reduce risks, or provide resource materials that assist protective responses. Channel is a communication medium to transmit the information as a message that underlies efforts to reduce risk. Messages come from environmental cues that underlie efforts to reduce ongoing hazards from environmental Messages can be sent through live a broadcast and a diffusion process by intermediary sources, not limited directly or indirectly to be well received. Then, it will be processed by receivers, parties who receive information. Receivers are considered to reduce risks or provide resource material that assists protective responses. The information process will stimulate the effect of receivers as a response to risk communication. The last is feedback, as the following action after the receiver responds to risk communication. Feedback determines the following appropriate protective responses to reduce risks.

This research emphasises the importance of earthquake mitigation and its sustainable development in Indonesian women's prisons. Programs must be developed carefully during ongoing hazards because human resources and finances are available for hazard management (Lindell & Perry, 2012); (LibreTexts, 2020). Earthquakes in Indonesia are unpredictable. Lapas Perempuan Kelas IIB Yogyakarta and other government institutions must be ready for it. When an earthquake occurs at Lapas Perempuan Kelas IIB Yogyakarta, many possibilities can lead to situations where some prisoners suffer physical and mental injuries. Earthquake mitigation is very crucial. Nevertheless, in practice, it has not received comprehensive attention. The implementation of earthquake mitigation at Lapas Perempuan Kelas IIB Yogyakarta should be based on humanity because until this time, women prisoners still face difficulties in achieving social justice, including in disaster management. Women are often not involved in the decision-making process related to disaster management, and as a result, those decisions are blunt and cannot represent women's aspirations.

METHOD

This research was conducted with a case study at Lapas Perempuan Kelas IIB Yogyakarta from April to August 2021. This research also was conducted with a descriptive qualitative approach. The descriptive qualitative approach is descriptive research is a study that describes or analyses a research result (Bengtsson, 2016). The research object is Lapas Perempuan Kelas IIB Yogyakarta due to the urgency of women prisoner's risk of becoming earthquake victims. The data were collected using the following techniques. First, the authors conducted twice observations. The first observation was at KANWIL KUMHAM D.I Yogyakarta to obtain research permits between October 2020 and June 2021. The second observation was at Lapas Perempuan Kelas IIB Yogyakarta to find real situations around September 2020. Second, the authors conducted closed and in-depth online interviews with Lapas Perempuan Kelas IIB Yogyakarta's representatives. The first online interview was in July 2021 through Google Meet to obtain earthquake mitigation data. The second online interview was in August 2021 through Google Meet to confirm and complete

earthquake mitigation data. Third, the authors conducted document studies to support the research database that had not been obtained from online interviews.

The authors conducted document studies that were relevant to the topic of the research. One of them is "*The Protective Action Decision Model (PADM): Theoretical Modifications and Additional Evidence*" (Lindell & Perry, 2012). Both emphasise processing information derived from social and environmental cues through communication channels to the public, who are at risk. The authors also conducted document studies of laws, Standard Operational Procedures, and other regulations. In this research, a triangulation technique was conducted to meet data validity. Triangulation is a technique to check data reliability by using something else for comparison (Flick, 2022). The authors studied and analysed data by editing irrelevant data to the research questions. In addition, the authors also conducted an inductive technique to identify patterns and relationships and generate conclusions from research data at Lapas Perempuan Kelas IIB Yogyakarta.

This research has limitations that limit its scope. First, the authors only identified patterns and relationships of a classical communication model, including source, channel, message, receiver, effect, and feedback. Second, the authors only explained earthquake mitigation for women prisoners at Lapas Perempuan Kelas IIB Yogyakarta. Third, the authors do not aim to justify the success or failure of risk communication applied through the Protective Action Decision Model (PADM) for sustainable earthquake mitigation development at Lapas Perempuan Kelas IIB Yogyakarta. Fourth, the authors specified natural hazard types, namely earthquakes, to make it easier to explain mitigation concepts and procedures. Therefore, this research will not discuss risk communication for hydrometeorological disasters such as floods, landslides, and hurricanes.

RESULTS AND DISCUSSION

Source: Play Roles of Internal Team for Earthquake Mitigation

Siaga Team has duty 24/7 at Lapas Perempuan Kelas IIB Yogyakarta. Siaga Team is an internal team responsible for disaster management and earthquake mitigation. Siaga Team members are prison staff and must have attended seventy hours of training with twelve training materials. Training should also support staff in addressing certain groups' unique needs, such as high-risk prisoners, and require additional attention (United Nations Office on Drugs, 2014). Every month, based on the regulations, Siaga Team members have to do exercises at least twice. Around 6-7 prison staffs are on guard every day at Lapas Perempuan Kelas IIB Yogyakarta. Meanwhile, 4-5 prison staff guard each residential block is also responsible for conducting routine patrols of all inside and outside security perimeters along with routine daily patrols. As an internal team at Lapas Perempuan Kelas IIB Yogyakarta, Siaga Team plays roles in risk assessments and disaster socialisations.

1. Risk Assessment

Siaga Team will work to conduct a risk assessment of potential disaster hazards such as earthquakes together with other internal teams. The information from environmental cues produces situational perceptions of risk (Lindell & Perry, 2012); (LibreTexts,

2020). Risk assessment is a situational perception of risk at Lapas Perempuan Kelas IIB Yogyakarta. Risk assessment helps prison staff to make the right decisions in the pre-disaster phase and prepare for ongoing earthquakes.

a. Static Security Identification

Identify static security such as infrastructures and facilities in prison. Static security identification is used to manage security equipment and conduct regular inspections of residential block areas. Information becomes references for prison staff in dynamic security measures such as repairing doors, removing barriers, security barriers, vulnerable points, and control points.

b. Siaga Team Identification

Identify capacities of the Siaga Team such as the number of members of prison staff, regular patrol arrangements, and member's knowledge, ability, expertise, and experience. Identification results were then followed up with capacity-building programs.

c. Evacuation Routes Identification

Identify evacuation routes in prison, such as exit doors from residential cells and evacuation routes to safe locations.

d. Safe Locations Identification

Identify safe locations in prison. Not all disasters require evacuation out of prison. A safe location is a closed or open room made with national or international security standards and equipped with accommodation facilities. Lapas Perempuan Kelas IIB Yogyakarta has a field as a safe open room and a pavilion as a safe, closed room for evacuation.

e. Coordination with Local Security and Disaster Management Institutions

The coordination of disaster management among relevant stakeholders. They are Regional Disaster Management Agency (also known as Badan Penanggulangan Bencana Daerah – BPBD), Indonesian National Police (also known as Kepolisian Negara Republik Indonesia – POLRI), and Indonesian National Army (also known as Tentara Nasional Indonesia – TNI) for disaster management.

2. Disaster Socialisation

Based on the institution's work plan, Lapas Perempuan Kelas IIB Yogyakarta conducted socialisations thrice for one year. Information in socialisation was not only about the disaster but also other vital information. Socialisation was conducted by gathering women prisoners in a field and a pavilion. However, Lapas Perempuan Kelas IIB Yogyakarta did not conduct socialisation directly in the last two years due to the COVID-19 pandemic. According to Lapas Perempuan Kelas IIB Yogyakarta's representative stated:

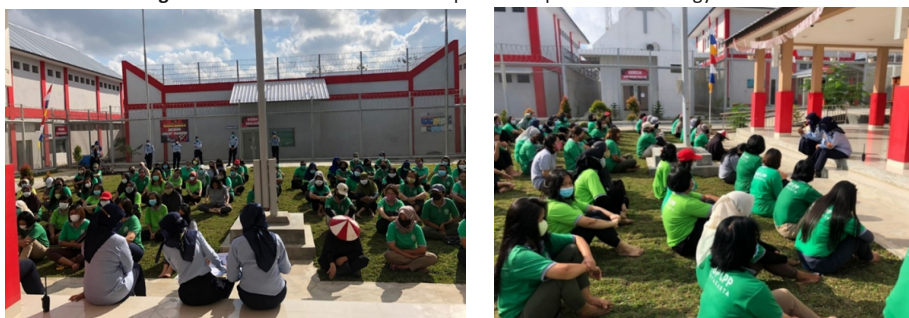
"Before the COVID-19 pandemic, we did it and gathered women prisoners together in a pavilion, Pendopo Lapas. Nevertheless, due to the COVID-19 pandemic, we do it when women prisoners are in their residential cells through loudspeakers" (Informant 1, personal communication, August 19, 2021).

In addition, after moving in Gunung Kidul Regency, Lapas Perempuan Kelas IIB Yogyakarta has not yet conducted disaster socialisations. Lapas Perempuan Kelas IIB Yogyakarta still concentrating on prevention of COVID-19. As a result, during 5.3 Richter Scale earthquakes in Gunung Kidul on June 28, 2021, around 5 am, Lapas Perempuan Kelas IIB Yogyakarta's representative stated there was a little panic.

"When earthquakes happened, staff unlocked women prisoners' residential cells around 5 am. Women prisoners were led to a field in the middle of Lapas Perempuan Kelas IIB Yogyakarta's residential block. We provide education for women prisoners to make them calm down. Women prisoners stay there while waiting for more information" (Informant 1, personal communication, August 19, 2021).

The research also found that mass communication techniques such as duration of information delivery and information repetition were used during disaster socialisation at Lapas Perempuan Kelas IIB Yogyakarta. It is such a unique discovery and tends to be trivial. But most of the information on disaster socialisation is essential. Duration of information delivery and information repetition can help to reduce information ambiguity. Ambiguity can start an iterative cycle of information processing and information-seeking until it is too late to complete protective measures before disaster hazards strike (Lindell & Perry, 2012); (LibreTexts, 2020). The information must be delivered repeatedly to reduce ambiguity so that women prisoners can receive and understand the information well.

Figure 1. Disaster Socialisation at Lapas Perempuan Kelas IIB Yogyakarta



Source: Documentation of Lapas Perempuan Kelas IIB Yogyakarta, 2021

The Channel: Support of Communication Media for Earthquake Mitigation

Communication media such as print and electronic are used to deliver Information at Lapas Perempuan Kelas IIB Yogyakarta. Each channel has advantages and disadvantages. This channel provides the fastest deployment and often provides minor information. Each individual has different access and communication preferences (Lindell & Perry, 2012); (LibreTexts, 2020). Warning information can be communicated through different channels and has different characteristics such as spread rate and precision, average activity penetration, message distortion, receipt verification, and many more.

1. Print Media

Print media is used to deliver text information, and print media allowed women prisoners to read information over and over again. However, print media used at Lapas Perempuan Kelas IIB Yogyakarta related to disaster management are still limited.

a. Disaster Signs

Disaster signs help women prisoner escapes during the earthquake. Disaster signs (such as gathering points and safe locations) and the disaster shelter are placed in several residential blocks, especially near stairs. Disaster signs used at Lapas Perempuan Kelas IIB Yogyakarta are disaster warning signs. Based on PERKA BNPB No 07/2015 (also known as PERKA BNPB Nomor 07 Tahun 2015) has several characteristics to identify disaster signs.

- White base colour, blue border, black symbol, and black lettering colour.
- Green base colour, white border, white symbol, and white lettering colour
- Blue base colour, white border, and white lettering colour.

Figure 2. Disaster Sign at Lapas Perempuan Kelas IIB Yogyakarta



Source: Documentation of Lapas Perempuan Kelas IIB Yogyakarta, 2021

b. Banner

Lapas Perempuan Kelas IIB Yogyakarta used banner to deliver information to visitor, women prisoner, and staff. Banner is placed outside of prison buildings. During the COVID-19 pandemic, the banner is used as an invitation to prevent the separation of COVID-19.

Figure 3. Banner at Lapas Perempuan Kelas IIB Yogyakarta



Source: Documentation of Lapas Perempuan Kelas IIB Yogyakarta, 2021

2. Electronic Media

Electronic media is used to deliver audio Information Electronic media is used to deliver not only general information but also mitigation information during disaster socialisation. Electronic media is more widely used because the prison system in Indonesia tends to use audio information.

a. Loudspeaker

Loudspeaker allows information to reach entire prison buildings, makes prison staff easily coordinate with women prisoners, and minimises noise.

b. Handy Talkie

Handy talkie is used for daily security and to deal with earthquakes. During disaster socialisations, staff used handy talkies to coordinate women and prisoners.

The Message: Earthquake Mitigation Information

Earthquake mitigation information can become life skills for women prisoners to deal with ongoing earthquakes. In specific risk communication channels, each source often provides conflicting messages and requires additional information to resolve confusion (Lindell & Perry, 2012); (LibreTexts, 2020). Information should describe events whose consequences are likely to occur shortly.

"We usually combine our loudspeaker into YouTube as well. In residential blocks, usually we play much information from YouTube" (Informant 1, personal communication, August 19, 2021).

The outbreak of COVID-19 in December 2019 in China's city of Wuhan, Hubei Province, occurred when online communication had virtually connected the world into one digital village (Waititu, 2021). YouTube is one of the online communication media used at Lapas Perempuan Kelas IIB Yogyakarta. Currently, YouTube users in Indonesia reached 170 million or 93.8 % of the total population of 181.9 million internet users aged 16-64 (Gultom & Pribadi, 2020). During the pandemic, YouTube is widely accessed for educational purposes. Lapas Perempuan Kelas IIB Yogyakarta delivers earthquake mitigation information from YouTube channels such as BNPB Indonesia and University of Al Azhar Indonesia.

YouTube users can hear audio information, see images, and watch and become involved in the scene that is taking place (Nasucha & Kertanegara, 2020). As it is regulated, women prisoners can not access YouTube videos directly. Only prison staff are responsible for playing YouTube videos for disaster education at Lapas Perempuan Kelas IIB Yogyakarta. Based on video samples, it consists of disaster education such as disaster risk, evacuation, earthquake mitigation, and safe location.

Figure 4. Videos from Badan Nasional Penanggulangan Bencana Indonesia's YouTube Channels



Source: YouTube Badan Nasional Penanggulangan Bencana Indonesia, 2021

Figure 5. Videos from the University of Al Azhar Indonesia's YouTube Channels

Source: YouTube University of Al Azhar Indonesia, 2021

Mostly, audio information is more often used at Lapas Perempuan Kelas IIB Yogyakarta. Lapas Perempuan Kelas IIB Yogyakarta also used bell as a warning system. It can be an indirect message and encourages women prisoners to identify their current disaster status in prison. Besides that, the bell is also used to give direct or indirect commands of other information.

Figure 6. Bell at Lapas Perempuan Kelas IIB Yogyakarta

Source: Documentation of Lapas Perempuan Kelas IIB Yogyakarta, 2021

"Perhaps ideally, a siren is used as a warning system. However, we did not use it and use a bell as a warning system in an emergency. When women prisoners have to eat lunch or breakfast or leave their cells, we also use a bell. When the disaster happens, a bell will ring continuously, which means that there are hazards and woman prisoners need to be on standby" (Informant 1, personal communication, August 19, 2021).

The Receiver: Characteristics of Women Prisoners

The receiver is related to communication purposes or parties who receive information. Women prisoners are information recipients at Lapas Perempuan Kelas IIB Yogyakarta. Women prisoners' characteristics affect their responses to disaster hazards.

1. Education

Some women prisoners are unfamiliar with earthquake mitigation because of their limited education. Education background determines the level of knowledge and skill.

Table 1. Women Prisoner's Education at Lapas Perempuan Kelas IIB Yogyakarta

Education Level	Quantity	Percentage
Elementary	14 Prisoners	11.01%
Junior High School	22 Prisoners	18.64%
Senior High School	45 Prisoners	38.1%
Vocational School	13 Prisoners	11.01%
Diploma	6 Prisoners	5.08 %
Bachelor Degree	16 Prisoners	13.55%
Master Degree	1 Prisoner	0.84%
Dropouts	1 Prisoner	0.84%
Total	118 Prisoners	100%

Source: Documentation of Lapas Perempuan Kelas IIB Yogyakarta, 2021

The average education background of women prisoners at Lapas Perempuan Kelas IIB Yogyakarta is low, as much as 80.50%. This percentage is most significant compared with women prisoners with higher education backgrounds at 19.09%.

2. Type of Crime

The type of crime determines the security system. Every prison in Indonesia separates residential blocks for a prisoner with a severe crime.

Table 2. Type of Crime at Lapas Perempuan Kelas IIB Yogyakarta

Type of Crime	Quantity	Percentage
Drug	39 Prisoners	33.05 %
Corruption	5 Prisoners	4.23 %
Money Laundering	1 Prisoner	0.84 %
Banking	1 N Prisoner	0.84 %
Theft	11 Prisoners	9.32 %
Theft, Counterfeiting Stamp/Letter & Money Laundering	1 Prisoner	0.84 %
Fraud And Money Laundering	1 Prisoner	0.84 %
Counterfeiting Stamp/Letter	3 Prisoners	2.54 %
Embezzlement	9 Prisoners	7.62 %
Embezzlement & Counterfeiting Stamp/Letter	1 Prisoner	0.84 %
Fencing	1 Prisoner	0.84 %
Fraud	30 Prisoners	25.42 %
Consumer Protection	1 Prisoner	0.84 %
Human Trafficking	1 Prisoner	0.84 %
Psychotropic	3 Prisoners	2.54 %
Currency	1 Prisoner	0.84 %
Health	3 Prisoners	2.54 %
Child Protection	2 Prisoners	1.69 %
Persecution	2 Prisoners	1.69 %
Murder	1 Prisoner	0.84 %
Transfer of Funds	1 Prisoner	0.84 %
Total	118 Prisoners	100%

Source: Documentation of Lapas Perempuan Kelas IIB Yogyakarta, 2021

Serious crimes such as murder require a prisoner to live in a residential block with multi-layered security and special procedures. A particular procedure should be developed to manage various movements of a prisoner between secure and less secure prison cells or to unsafe external locations (United Nations, 2013). Multi-layered security and special procedures indirectly limit women prisoners' access to escape from prison.

3. Punishment Period

Types of crime determine the court's decisions regarding the punishment period that women prisoners must conduct.

Table 3. Punishment Period at Lapas Perempuan Kelas IIB Yogyakarta

Punishment Periods	Quantity	Percentage
<1 Year	13 Prisoners	11.01 %
1 – 4 Years	46 Prisoners	39.98 %
5 – 8 Years	34 Prisoners	28.81 %
9 – 12 Years	3 Prisoners	2.54 %
13 – 16 Years	4 Prisoners	3.38 %
16 – 19 Years	2 Prisoners	1.69 %
20 Years	2 Prisoners	1.69 %
>20 Years	-	-
In process	14 Prisoners	11.86 %
Total	118 Prisoners	100%

Source: Documentation of Lapas Perempuan Kelas IIB Yogyakarta, 2021

The average punishment period for women prisoners at Lapas Perempuan Kelas IIB Yogyakarta is 1-4 years (39.98%). Furthermore, 5-8 years (28.81%), less than 1 year (11.01%), 13-16 years (3.38%), 9-12 years (2.54%), and 16-19 years (1.69%). If women prisoners are involved in a serious crime, their punishment periods tend to be extended. The longest punishment period at Lapas Perempuan Kelas IIB Yogyakarta is 20 years.

4. Age

Age is related to health. The older a person is, the more susceptible to health problems. Increasing age causes physiological changes that underlie the risk of chronic disease (World Health Organisation, 2015). The average age of women prisoner at Lapas Perempuan Kelas IIB Yogyakarta is late adulthood, as much as 33.89%. Furthermore, early adults as much as 30.50%, early teens as much as 16.94%, early elderly as much as 14.40%, and late elderly as much as 4.37%. The youngest women prisoner at Lapas Perempuan Kelas IIB Yogyakarta is 18 years old. In contrast, the oldest is 61 years old.

Table 4. Women Prisoner's Age at Lapas Perempuan Kelas IIB Yogyakarta

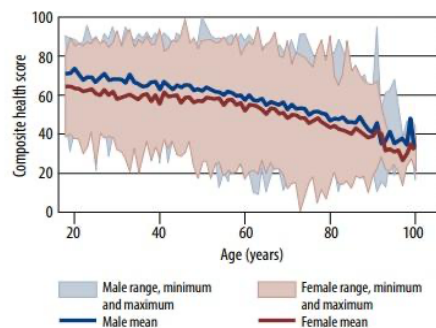
Age Categories	Age Gaps	Quantity	Percentage
Baby	0-5 Years	-	-
Child	5-11 Years	-	-
Early Teen	12-16 Years	-	-
Late Teen	17-25 Years	20 Prisoners	16.94 %
Early Adult	26-35 Years	36 Prisoners	30.50 %
Late Adult	36-45 Years	40 Prisoners	33.89 %
Early Elderly	46-55 Years	17 Prisoners	14.40 %
Late Elderly	56-65 Years	5 Prisoners	4.37 %
Orpahns	>65 Years	-	-
Total		118 Prisoners	100 %

Source: Documentation of Lapas Perempuan Kelas IIB Yogyakarta, 2021

Age and gender affect physical and mental capacities (World Health Organisation, 2015). Late adults (36-45 years), early elderly (46-55 years), and late elderly (56-65 years) experienced a decrease in physical capacities and health problems such as

vision and hearing. Disasters can also seriously limit older individuals' full range of capacities compared to younger individuals if they experience the same situations (World Health Organisation, 2015).

Figure 7. Age Affects Individual's Responses to Hazards



Source: World Health Organisation, 2015

The Effect of the Implementation of Earthquake Mitigation

After-effects also follow risk communication. The effect is related to how information influences their capacities for earthquake mitigation. Earthquake mitigation knowledge and skill are critical to reducing the risk of women prisoners becoming earthquake victims. Implementation of earthquake mitigation at Lapas Perempuan Kelas IIB Yogyakarta indicates a protection guarantee from their institutions to deal with disaster hazards. The implementation of earthquake mitigation stimulates women prisoner knowledge and skill.

1. Knowledge

- Increase their knowledge related to risk assessment on potential earthquake hazards.
- Increase their knowledge regarding evacuation routes, gathering points, and safe locations.
- Increase their knowledge regarding correct evacuation schemes following staff instructions.
- Increase their knowledge related to mitigation concepts.

2. Skill

- Improve their survival skills.
- Improving their self-evacuation skills during an earthquake in prison.
- Improve their listening skills to follow instructions.
- Improve their earthquake mitigation skills.

Stages in the Protective Action Decision Model (PADM) characterise an individual's decisions by adopting measures to protect against environmental hazards (Lindell & Perry, 2012); (LibreTexts, 2020). The implementation of earthquake mitigation can increase women prisoners' knowledge and skill. Before their sentence at Lapas Perempuan Kelas IIB Yogyakarta, some of them maybe have had no knowledge or skill in disaster management.

The Risk Communication's Feedback

Risk communication's feedback at Lapas Perempuan Kelas IIB Yogyakarta is to create a personal closeness between women prisoners and staff and a joint synergy between women prisoners and staff. Earthquake mitigation in women's prisons can be reflected by the phrase "*women guard other women*". Most prison staff are women and serve as guards for women prisoners to deal with ongoing disaster hazards. Every residential block may only be guarded by women staff. Interpretation of gender in disaster management needs a measurement form for disaster preparedness and anticipation schemes can be shared equally between gender and age. Earthquake mitigation for women prisoners presents gender inclusion. Gender inclusion contributes to creating a women-friendly prison. In addition, gender inclusion creates independent women prisoners and encourages efforts to create resilient prisons to disaster hazards. The gender inclusiveness concept underlies a gender-sensitive approach in prison.

- a. Recognition of women prisoners' different needs.
- b. Capacities and willingness of prison staff to communicate openly with women prisoners less authoritarian manner.
- c. Skills include active listening and patience in explaining prison regulations and women prisoners' expectations.
- d. Awareness of emotional dynamics and capacities to respond decisively, fairly, and consistently.

Women's Prison in Shackles of Earthquake Hazards in Indonesia

Legal cases involving women in crime are sporadic. Meanwhile, women are often victims of crime punishment because of their inherent nature (United Nations Office on Drugs and Crime, 2014). However, in particular, women involved in crimes are more likely to have crime characteristics in social situations. It often leads to conflicts between prison staff and women prisoners. Regarding disaster hazards in Indonesia, every woman prisoner has the right to protection. As following of Decree of Directorate General of Corrections Indonesia Number: PAS-57.OT.02.02/2019 (also known as Surat Keputusan Direktur Jenderal Pemasyarakatan Indonesia Nomor: PAS-57.OT.02.02 Tahun 2019), Directorate General of Corrections Indonesia seeks to create resilient prison to disasters by prioritising disaster management programs.

1. Reducing risk caused by natural factors and technological failures reduces the risk of life loss, infrastructure, and existing facilities.
2. Disaster management in prisons is continuing process Starting from early detection, preparedness, early warning, and disaster emergency management.
3. Creating a prison disaster management system through legislation, institutions, and sustainable funding.

Like other prisons in Indonesia, related to disaster management, Lapas Perempuan Kelas IIB Yogyakarta has Siaga Team. However, since the earthquakes in Indonesia are unpredictable and implemented in women's prisons, it has always been not easy. Based on this research, there are several challenge faced by Lapas Perempuan Kelas IIB Yogyakarta.

1. Human Resource

As mentioned before, Lapas Perempuan Kelas IIB Yogyakarta has limited human resources that can provide disaster education to women prisoners. Only some prison staff received disaster education. Furthermore, it caused limited availability of information related to disaster management at Lapas Perempuan Kelas IIB Yogyakarta. Besides of majority of women prisoners having low education background, they also limited access of women prisoners to information sources. Based on this research, Lapas Perempuan Kelas IIB Yogyakarta depends on The National Disaster Management Authority for disaster management. It is somehow necessary as a credible information source.

2. Facility

Lapas Perempuan Kelas IIB Yogyakarta has problems with the capacity-building program for prison staff related to disaster management. Based on this research, the government still lacks in preparing a disaster preparedness framework for prisons, especially women's prisons. This can be seen from the limited government facility that provides capacity-building programs such as simulation, training, and workshops to increase prison staff capacities.

The Dynamics of Risk Communication in Women's Prisons

During their sentence, women prisoners can not fully access their rights as citizens, and prisoner status limits their rights because they already break the law. For example, women prisoners are restricted from communicating with the outside world. Women prisoners must have a specific reason to be able to communicate with the outside world, such as their family. In addition, women prisoners are prohibited from bringing communication tools such as the telephone and are only allowed to use wartelsus. Wartelsus is a public telephone facility in prison. Restrictions of some of their fundamental right are one of punishment and are intended to provide a deterrent effect related to crimes that have been committed. As mentioned, the government implements multi-layered security in prisons, including women's prisons, to prevent their escape.

In some instances, multi-layered security indirectly affects women prisoners' psychology. In addition, women's prison in Indonesia also implements special procedures for safety measurement in a disaster situation. However, the situation can differ during a disaster such as an earthquake. Multi-layered security can put women prisoners in danger because they might leave behind their cells when an earthquake occurs. Special procedures for safety measurement did not work well because, as mentioned before, each individual, both prison staff and women prisoner, has their urgency to mitigate themselves from prison. Although there is already risk communication to inform women about the hazards that will come ahead, the prison situation can be chaotic and out of control during an earthquake. As its purpose, risk communication tries to build protective actions to deal with ongoing disaster hazards. However, earthquakes can break everything. Self-safety is an instinct of each individual to survive.

Based on this research, risk communication has gone well in the pre-disaster phase in almost all prisons, but the solutions offered are often not taken. Mitigation is not held procedurally. If this continues, the losses caused by earthquakes will be static and increase from year to year. That is a point this research tries to stand for, to emphasise the importance of earthquake mitigation and its sustainable development in Indonesian women's prisons. As mentioned, the number of women prisoners in Indonesia increases with the increase of Indonesian exposure to disaster hazards. Sustainable earthquake mitigation development is needed to deal with ongoing earthquakes whose risks are increasingly widespread and prevent more prisoners from becoming prison victims.

Implementation of Earthquake Mitigation in Indonesian Women's Prison

Mitigation is a series of efforts to reduce risk through physical development or capacity building to deal with disaster hazards. The institution has a strategic part in creating integrated mitigation mechanisms. Based on SOP No AS.220.OT.02.02.201/2016, there are safety and security procedures for other situations such as fires, rebellions, and attacks from outside prison. Government has full responsibility for coordinating earthquake mitigation at the national and regional levels. Institutionally, earthquake mitigation has been arranged in Law No PAS-57.OT.02.02/2019. It specifically divided Standard Operation Procedure (SOP) for earthquake mitigation into three phases: pre-disaster, during the disaster, and post-disaster.

Pre-disaster is a crucial phase as preparedness in facing ongoing disaster hazards. Based on this research, Lapas Perempuan Kelas IIB Yogyakarta did a risk assessment and disaster socialisation in the pre-disaster phase. Risk assessment is a key to ensuring that all security indicators can function adequately, such as static security, evacuation routes, and safe locations when an earthquake occurs in prisons. A remain of earthquakes is indeed considered high risk due to their potential magnitude and widespread impacts in Indonesia. However, the information gap between women and men prisoners still happened related to disaster management due to low gender inclusion. In some cases around the world, women do not receive hazardous information and warning because their behaviour patterns or information preferences are not considered.

Therefore, women's prison in Indonesia needs to adopt a gender-sensitive approach. A gender-sensitive approach assists the unique needs of women prisoners, and it has been underlined by prison reform experts worldwide (United Nations Office on Drugs, 2014). Women prisoners' vulnerability to disasters such as earthquakes must be understood as cultural and organisational. Knowing the different needs of women prisoners of disaster management information will help achieve gender inclusion. Earthquake mitigation should also be based on gender inclusion. Gender inclusion promotes gender equality in society and eliminates gender-biased views in disaster management by considering each gender-equal access to the information source.

CONCLUSION

This research found that Lapas Perempuan Kelas IIB Yogyakarta has implemented earthquake mitigation but needs to be developed to adapt to prison dynamics. Sustainable earthquake mitigation development in Indonesian women's prisons is urgently needed. The number of women prisoners in Indonesia increases with the increase of Indonesian exposure to disaster hazards. Sustainable earthquake mitigation development is needed to deal with ongoing earthquakes whose risks are increasingly widespread and prevent more women prisoners from becoming prison victims. There are several challenges faced by Lapas Perempuan Kelas IIB Yogyakarta related to disaster management. It includes limited human resources to provide disaster education to women prisoners and limited facilities from the government that provide capacity-building programs to increase prison staff capacities in disaster management.

Pre-disaster is such a crucial phase as preparedness in facing ongoing disaster hazards. Lapas Perempuan Kelas IIB Yogyakarta did a risk assessment and disaster socialisation in pre-disaster phase. Based on this research, risk communication has gone well in the pre-disaster phase in almost all prisons in Indonesia, but solutions offered are often not taken. Mitigation is still not held procedurally. From earthquake events in Indonesia, both staff and prisoners had an urgency to mitigate and escape prison. If this continues, the losses caused by earthquakes in prison will be static and increase yearly. The majority of prisoners at Lapas Perempuan Kelas IIB Yogyakarta are from a low education background.

Earthquake mitigation in Indonesian women's prisons should be implemented based on humanity because, until this time, women prisoners still face difficulties in achieving social justice, including in disaster management. Because of limited human resources in disaster management, Lapas Perempuan Kelas IIB Yogyakarta still depends on The National Disaster Management Authority for disaster management. Women prisoners' vulnerability to disasters such as earthquakes must be understood as cultural and organisational. Therefore, women's prison in Indonesia needs to adopt a gender-sensitive approach. Knowing the different needs of women prisoners of disaster management information will help achieve gender inclusion. Earthquake mitigation should also be based on gender inclusion, and the government must pay more attention to disaster management, especially in prison systems.

Furthermore, the government must provide a long-term program to increase human resources capacity in prison related to disaster management, such as earthquake mitigation. Considering women prisoners' characteristics such as education, type of crime, crime period, and age in prison is much more helpful in formulating long-term programs at Lapas Perempuan Kelas IIB Yogyakarta. Ultimately, all parties should be involved because disaster management, such as earthquake mitigation in women's prisons, is complicated and requires coordination of all parties.

REFERENCES

- Badan Nasional Penanggulangan Bencana. (2021). *Risk mapping in D.I Yogyakarta*. InaRISK. <https://inarisk.bnpb.go.id/>.
- Badan Nasional Penanggulangan Bencana. (2019, October 18). *Kiat-kiat mitigasi praktis menghadapi bencana part 4* [Video]. YouTube. <https://www.youtube.com/watch?v=02u9tySaNoU&t=2s>.
- Bengtsson, M. (2016). How to plan and perform a qualitative study using content analysis. *NursingPlus Open*, 2, 8-14. <https://www.sciencedirect.com/science/article/pii/S2352900816000029>.
- Duffy, N. (2020). *Disaster education, communication and engagement* (Ebook). West Sussex: John Wiley & Sons.
- Flick, U. (2022). *The SAGE Handbook of qualitative research design* (Ebook). London: SAGE Publishing.
- Gultom, F. & Pribadi, F. (2021). Symbolic violence against persons with disabilities in the Trans T.V. official program ngobrol asal on YouTube. *Ultimacomm*, 13(2), 301-317. <https://ejournals.umn.ac.id/index.php/FIKOM/article/view/2364>.
- International Committee Of The Red Cross. (2007). *Women in war: A particularly vulnerable group?* <https://www.icrc.org/en/doc/resources/documents/feature/2007/women-vulnerability-010307.htm>.
- Islam, F. (2019). Ketimpangan akses akibatkan perempuan lebih rentan saat terjadi bencana alam. *The Conversation*. <https://theconversation.com/ketimpangan-akses-akibatkan-perempuan-lebih-rentan-saat-terjadi-bencana-alam-109651>.
- LibreTexts. *The protective action decision model*. (2020, July 20). LibreTexts. https://workforce.libretexts.org/Bookshelves/Safety_and_Emergency_Management/Fundamentals_of_Emergency_Management/4%3A_Risk_Perception_and_Communication/4.3%3A_The_Protective_Action_Decision_Model.
- Lindell, M. & Perry, R. (2012). The Protective Action Decision Model: Theoretical modifications and additional evidence. *International Journal Risk Analysis*, 32(4), 616–623. <https://doi.org/10.1111/j.1539-6924.2011.01647>.
- Nasucha M. & Kertanegara, R. (2020). The Audience's response to gender relation campaign of ketchup brand on Youtube. *Ultimacomm*, 12(1), 144-166. <https://ejournals.umn.ac.id/index.php/FIKOM/article/view/1323>. <https://ejournals.umn.ac.id/index.php/FIKOM/article/view/1323>
- Ninis, C. (2018). Kabur saat gempa palu, 68 napi telah kembali. *Tempo*. <https://nasional.tempo.co/read/1132245/kabur-saat-gempa-palu-68-napi-telah-kembali>.
- Simm, G. (2018). Disaster response in Southeast Asia: The ASEAN Agreement on disaster response and emergency management. *Asian Journal of International Law*, 8(1), 116-142. <https://www.cambridge.org/core/journals/asian-journal-of-international-law/article/abs/disaster-response-in-southeast-asia-asean-agreement-on-disaster-response-and-emergency-management/FD77A7CB07AE4F4232A69237F521C450>.
- Singh, J. P. (2010). *United Nations Educational, Scientific, And Cultural Organisation (UNESCO): creating norms for a complex world*. London: Routledge.

- <https://www.taylorfrancis.com/books/mono/10.4324/9780203838587/united-nations-educational-scientific-cultural-organisation-unesco-singh>.
- United Nations. (2013). *Prison incident management handbook*. https://www.un.org/ruleoflaw/files/Prison_Incident_Management_Handbook_OR_OLSI_Mar2013.pdf.
- United Nations Office on Drugs and Crime. (2014). *Handbook on women and imprisonment, 2nd edition*. https://www.unodc.org/documents/justice-and-prison-reform/women_and_imprisonment_-_2nd_edition.pdf.
- University of Al Azhar Indonesia. (2019, September 3). *Mitigasi gempa bumi* [Video]. YouTube. https://www.youtube.com/watch?v=WyCeL_4HYz0.
- Waititu, P. (2021). Social media as sources of information on COVID-19 among students in tertiary institutions in Kenya. *Ultimacomm*, 13(2), 187-196. <https://ejournals.umn.ac.id/index.php/FIKOM/article/view/2194>.
- World Health Organisation. (2015). *World health statistics 2015*. <https://www.who.int/docs/default-source/gho-documents/world-health-statistic-reports/world-health-statistics-2015.pdf>