



PREGNANT WOMEN'S PREPAREDNESS IN FACING EARTHQUAKES DISASTER RISK

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ABSTRACT

Earthquake disasters can pose many challenges for pregnant women, namely a lack of access to prenatal care and emergency medical services needed. In emergency disaster conditions, what must be of special concern to pregnant women is the safety and well-being of the baby in their womb. This study aims to determine how prepared pregnant women are in facing the risk of earthquake disasters. This study employs a qualitative phenomenological research approach. The phenomenological approach in qualitative research focuses on the essence of life experiences or phenomena that can be observed or experienced by people from different perspectives. This study involved 5 pregnant women. Data collection techniques were carried out using semi-structured interviews. The instrument used was an interview guide for pregnant women's preparedness to face earthquake disasters. The data analysis used is Colaizi analysis. There are 4 themes, namely the highest risk is earthquakes, pregnant women as a vulnerable group, the preparedness of pregnant women, and being prepared for childbirth. The good preparedness of these pregnant women demonstrates that they are aware of the high-risk area for earthquake disasters and are ready for whatever may happen, including childbirth in disaster conditions.

Keywords: earthquake; pregnant women; preparedness

How to cite (in APA style)

Anisa, D. N., Wulandari, E. T., & Suminar, I. T. (2025). Pregnant Women's Preparedness in Facing Earthquakes Disaster Risk. *Indonesian Journal of Global Health Research*, 7(5), 1131-1136. <https://doi.org/10.37287/ijghr.v7i5.6916>.

INTRODUCTION

Indonesia is one of the countries that often experiences earthquakes (Achmad, 2023). Earthquakes are natural disasters with sudden and rapid shocks caused by shifting rocks beneath the Earth's surface or by volcanic or magmatic activity on Earth that can occur without warning and can occur at any time (Achmad, 2023). Based on the Governor of the Special Region of Yogyakarta (2021), Java Island is an island with a high potential for earthquakes. Earthquake disasters in the Special Region of Yogyakarta will potentially continue to occur because the Special Region of Yogyakarta is located on a fault line controlled by plate tectonics (Governor of the Special Region of Yogyakarta, 2021). Bantul Regency is one of the regencies with the highest risk of earthquakes (National Disaster Management Agency, 2023). As a result of the high risk of earthquakes, Bantul Regency is also at high risk of experiencing losses in terms of social (mental), physical, and economic (Governor of the Special Region of Yogyakarta, 2021).

The high risk of earthquakes in Bantul Regency makes it necessary for people living in Bantul Regency to increase their preparedness for earthquakes. Preparedness is part of disaster management that aims to minimize losses, both in infrastructure and deaths caused by earthquakes (Dewi et al., 2020). Groups of individuals who need to be prioritized in this disaster preparedness are individuals who are included in vulnerable groups, such as the elderly, individuals with disabilities, infants, and pregnant women (Watanabe et al., 2022). In addition to urgent disaster-related needs such as safety, shelter, food, and clean water, infants, toddlers, and pregnant women require immediate and adequate treatment (Giusti et al., 2022).

Earthquake disasters can pose many challenges for pregnant women, namely a lack of access to prenatal care and emergency medical services needed (Abdullah et al., 2023). A study by Inoue et al. (2022) showed the impact of earthquakes on pregnant women, namely preterm birth and low birth weight (LBW). This is usually due to stress that occurs in the first or third trimester, which affects the levels of the pregnant woman's cortisol hormone, so that it has a direct effect on the outcome of her birth (Menclova & Stillman, 2020). So that in emergency disaster conditions, what must be of special concern to pregnant women is the safety and well-being of the baby in her womb (Giusti et al., 2022).

Preparedness for pregnant women has been regulated as stipulated in Law of the Republic of Indonesia Number 24 of 2007 concerning Disaster Management, which explains that preparedness is carried out to ensure fast and appropriate efforts in dealing with disasters by involving vulnerable groups, one of which is pregnant women. According to APHA (2024), there are 3 levels of preparedness for pregnant women, namely before the earthquake, during the earthquake, and after the earthquake. Based on this background, the author aims to conduct research related to the preparedness of pregnant women in dealing with the risk of earthquake disasters. The author chose Bantul because the distance was not too far from the source of the fault in the 2006 earthquake. The DIY earthquake was caused by the opak fault plate (Fitrianingtyas et al., 2023). Therefore, this study aims to determine the preparedness of pregnant women in facing the risk of earthquake disasters. With a description of preparedness, the author is expected to be able to follow up by providing education to pregnant women about how to prepare for pregnant women.

METHOD

This research is a type of qualitative phenomenological research. The phenomenological approach in qualitative research focuses on the essence of life experiences or phenomena, which can be observed or felt by people who have different points of view. The researcher used a phenomenological approach to describe the preparedness of pregnant women in facing the risk of earthquake disasters. This approach was chosen because it allows participants to provide richer and more authentic perspectives and experiences. This was done to explore the preparedness of pregnant women in facing the risk of earthquake disasters. The sampling technique that will be used is snowball sampling. Snowball sampling is one of the most popular data collection methods in qualitative research with network or referral characteristics. Determination of the sample through network connections from previous respondents. Inclusion criteria include pregnant have experienced pregnancy during the 2006 Bantul earthquake. Exclusion criteria in this study are pregnant women who have comorbidities, pregnant women who have limitations in speaking, and who do not want to be respondents in the study. The data analysis used is Colaizi analysis. The number of respondents involved in this study was 5 people. Data collection techniques were carried out using semi-structured interviews. The instrument used was an interview guide for pregnant women's preparedness to face earthquake disasters.

RESULT

Based on the results of the Colaizi analysis, 4 categories were found, which can be seen in the following table 1.

Based on table 1, there are 4 themes related to the preparedness of pregnant women in facing the risk of earthquake disasters, namely, the highest risk is earthquakes, pregnant women as a vulnerable group, the preparedness of pregnant women, and being prepared for childbirth.

Table 1.

Preparedness of Pregnant Women in Facing the Risk of Earthquake Disasters		
Koding	Kategori	Tema
Earthquake Tectonic Earthquakes The Ground Shakes	Earthquake As High Risk	The Highest Risk is Earthquake
Pregnant Women Are Vulnerable Causes of Vulnerability of Pregnant Women	Pregnant Women as a Vulnerable Group	Pregnant Women as a Vulnerable Group
Protecting Yourself Heading to the Assembly Point Alert Bag	Pregnant Women's Preparedness for Earthquakes	Pregnant Women's Preparedness
Characteristics of Labor Seeking Help During Labor	Ready for Childbirth	Preparedness for Childbirth

DISCUSSION

Bantul is a district with a high risk of earthquakes. Based on the results of the research analysis, it was found that the Highest Risk theme is Earthquakes. All respondents said that earthquakes are a high risk in their area. As stated by the first respondent as follows "*... certainly the earthquake disaster is the most common one*". The second respondent also said the same thing "*... for earthquakes, eh if earthquakes, they often happen here ...*". This is also explained in BNPB (2022) that Bantul is a district with the highest earthquake disaster risk index among other districts in the Special Region of Yogyakarta. The reason Bantul Regency is at high risk of earthquakes is that the district is crossed by the Opak fault, which is an active fault that heads southwest to northeast (Maharani et al., 2024). The subduction zone, which is the meeting point of the Indo-Australian plate, which is adjacent to Bantul Regency, is also the reason why Bantul Regency is included in the districts with a high risk of earthquakes in Indonesia (Maharani et al., 2024).

Because Bantul Regency is the regency with the highest risk of earthquakes, this requires awareness from each of its citizens that they live in a high-risk earthquake area. One group that is important to increase awareness of is pregnant women. The second theme is pregnant women as a vulnerable group. This shows the awareness that they are included in the vulnerable group and need to be prioritized when an earthquake occurs. As stated by the second respondent as follows "*... so maybe that's what causes pregnant women to be included in the vulnerable group and need to be prioritized if helped ...*". Respondent three also said the following, "*...those who are vulnerable are like the elderly, children, pregnant women ...*". According to Asrawaty et al (2024) that the vulnerable group of pregnant women is the main focus in efforts to prevent and handle natural disasters. If not prioritized, several health threats to pregnant women will occur, such as premature birth, low birth weight, increased fetal death, and the incidence of heart disease and diabetes later in life (Esfandyari et al., 2019).

There are several respondents' opinions as reasons why pregnant women are included in the vulnerable group. The first respondent said the following "*... because from their physical side, it's already difficult to carry their bodies, let alone if they have to run or whatever, it must be tiring, so they must be prioritized to be helped ...*". In addition, the third respondent also said the same thing as follows "*... if pregnant women want to walk, they have difficulty and must be helped too ...*". This is emphasized by the statement from Asrawaty et al. (2024) that physical and mental conditions make pregnant women vulnerable so they need special protection and planning and this is a necessity that cannot be negotiated.

Because they are aware that pregnant women are one of the vulnerable groups, most of them already understand how to do it when an earthquake occurs, including protecting themselves, going to a gathering point, and bringing a disaster preparedness bag in case they have to evacuate at any time. Efforts to protect themselves were obtained from the second respondent as follows: "*... then if it is not possible due to an earthquake, what is it called, taking shelter under the table,...*". The

fourth respondent also said almost the same thing as follows: "... maybe looking for shelter under what is under the table or something and while protecting the head ...". An earthquake rescue plan needs to be considered before the earthquake occurs. In the study by Dewi et al. (2022), it is explained that practicing avoiding the impact of debris can be done by learning how to duck, take shelter under a table, or protect the head. However, if this is not done properly, when an earthquake occurs, the next impact is the emergence of head and neck injuries due to the earthquake disaster (Du et al., 2016).

After protecting themselves, the next action taken by pregnant women is to run to a safer place or gathering point. The following is a statement from the first respondent: "... to protect yourself, look for a wide place... like in an open field far from trees, from buildings...". The second respondent also explained as follows: "... if, for example, there is a siren, immediately gather at the gathering point...". Immediately after the earthquake stops, you should immediately gather at the gathering point and stay away from buildings and do not stand near poles or trees (Leiwakabessy & Tarehy, 2023). Providing an open space as a gathering point should be 30-60 meters from the position of the building. Even as a mitigation measure, it is necessary to determine a temporary gathering point to minimize the impact during a disaster (Irsyad et al., 2022).

In addition to protecting yourself and heading to the gathering point, there is something that needs to be prepared, namely a disaster preparedness bag as a form of preparedness in case of an earthquake and the need to evacuate. The statement of the first respondent is as follows "... definitely like a housedress and later preparations like diapers and so on, yes, that preparation is for preparation in case of giving birth at any time, so that's what needs to be brought in case of a disaster.. maybe that's what is called a disaster preparedness bag for pregnant women, right, sis ...". The third respondent also explained the importance of several administrative documents that will be important for preparing for childbirth, as if her statement was as follows "... such as BPJS, KK, KTP are needed and the pink book from the health center is also important to bring when evacuating ...". Disaster preparedness bags need to be prepared by family members in case of a disaster or other emergency conditions (Cahyo et al., 2023). In addition, this disaster preparedness bag is useful for preparing to survive when help has not arrived and makes it easier to evacuate to a safe point (Cahyo et al., 2023).

Pregnant women also show readiness to face childbirth during disaster conditions by understanding the characteristics of childbirth, so that they decide to go to health services. The third respondent explained in detail the characteristics of childbirth as follows "the first is the feeling of contractions, there are two types of contractions, right ma'am, the first is false contractions and the second is real contractions ... for the false ones, ehheh the pain is not too much so only once or twice, but if the real contractions can be frequent and every minute or something like that can be counted Then the second is the presence of mucus or blood spots that indicate the opening of the vagina of the birth canal .. ". The fourth respondent also explained the characteristics of childbirth as follows "... maybe blood comes out and mucus comes out like that, these contractions are contractions quickly, at most 10 minutes once and you have to go to health services immediately ..". If the signs of labor have arrived, go to a health care facility immediately (Ministry of Health of the Republic of Indonesia, 2020). This shows the readiness of the mother and family in facing childbirth. Delays in getting help from health facilities are one of the causes of the increase in maternal mortality rates (Fitrianeti et al., 2018).

They have also thought about if a disaster occurs and they have to evacuate, they immediately ask for help from the nearest health workers or those available in the evacuation. As conveyed by the first respondent, as follows: "... come to the nearest midwife, miss, to check whether the opening is there or not and ask for help.". The fifth respondent also gave the following explanation: "... Mom, try to stay calm while looking for a solution... and immediately ask for help from the available medical

personnel.". One of the health workers who can help with childbirth in the evacuation area is a midwife. As stated in Law of the Republic of Indonesia Number 36 of 2014 concerning Health Workers, one of the groups included in health workers is midwifery, where they must carry out their respective duties and responsibilities during the disaster crisis phase (Wicaksono et al., 2024). Women's issues, pregnancy, childbirth, lactation, and family planning are the duties and responsibilities of midwives on duty in evacuation (Taghizadeh et al., 2017).

CONCLUSION

There are 4 themes related to the preparedness of pregnant women in facing the risk of earthquake disasters, namely, the highest risk is earthquakes, pregnant women as a vulnerable group, the preparedness of pregnant women, and being prepared for childbirth.

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