

PHENOMENOLOGICAL STUDY: THE EXPERIENCE OF SOCIETY IN DEALING WITH FLOODS BINTARO URBAN VILLAGE DISTRICT OF PESANGGRAHAN SOUTH JAKARTA

By

Jamaludin¹, Widiany Nurrahmah², Eny Nuraeni Agustin³, Yang Fajar Kurniawan⁴

1,4Hermina Institute Of Health Sciences

^{2,3}Syarif Hidayatullah State Islamic University Jakarta

Email: 1 jamalybb@yahoo.co.id

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Experience, Preparedness, Flood Disaster **Abstract:** Flood is one of the natural disaster which is frequently happened in Indonesia. Special Capital Region (DKI) of Jakarta has a very high frequency of flood, that requires preparedness. Flood prevention efforts are useful to anticipate losses that ensued and minimize casualties. The experience of citizens against floods have different responses - depending on the disaster preparedness measures undertaken. Aim: this study aims to explore the experience of community preparedness in facing the flood in RT 001 RW 012 Bintaro Urban Village District of South Jakarta Pesanggrahan in 2024. Methode: This study is a qualitative research design of descriptive phenomenology through FGD (Focus Group Discussion) and field notes. The informants are included people who have experienced in flood incident obtained through purposive sampling technique. The data which are collected in the form of FGD recordings, interviews and field notes were analyzed by Colaizzi method. This study identifies four themes, namely: 1) The impact of flooding experienced by the community; 2) Sources of knowledge gained by public about flood prevention programs; 3) Community preparedness efforts in facing the flood; 4) The role of government in the flood disaster preparedness efforts. Result: the results could provide an overview of community preparedness experience in facing the flood. Further research is needed on deeper exploration of the role of nurses in the form of community involvement in flood disaster management. Conclusion: the government's role in dealing with floods, such as dikes, dredging, procurement of pump houses, relocation of settlements, the establishment of flood prevention teams, the availability of public kitchens and logistics, the procurement of flood tools and health services at the local Health Center.

PENDAHULUAN

The territory of Indonesia is in disaster-prone areas. Indonesia consisting of archipelagic clusters has a very high disaster potential and also varies greatly from disaster type aspects. These natural conditions and the diversity of the population and culture in Indonesia caused the risk of natural disasters, human-caused disasters and complex



emergencies (BNPB, 2008). Disasters that occur in Indonesia are increasing every year. Based on disaster recapitulation data by BNPB (2014) the most frequent disasters in Indonesia from 1815-2011 are floods 3990 with incidents (39%), whirlwinds with 1771 incidents (17%) and landslides with 1600 events (16%). According to BNPB (2014) disaster is an event or series of events that threaten and disrupt the life and livelihood of the community caused by both natural and / or non-natural factors and human factors resulting in the occurrence of human lives, environmental damage, property loss, and psychological impact.

Flood is the most common natural disaster in Indonesia (BNPB, 2014). Indonesia's most flood-prone areas are located in Java including the province of DKI Jakarta. DKI Jakarta Province is the capital of the Republic of Indonesia which is a lowland (24,000 hectares) with average height below sea level (BPBD DKI Jakarta, 2013). Naturally, this condition positions Jakarta area has high vulnerability to flood. Floods in Jakarta are divided into two, namely floods caused by overflowing river rivers due to high rainfall and floods that occur due to shipments from upstream areas, namely Bogor. (BNPB, 2008). Areas affected by floods due to rainfall include Pesing, Sunter, Mampang, Bintaro, Hankam Slipi and Bukit Duri. The areas affected by floods from upstream of the river include West Jakarta caused by the overflow of the Cisadane River are Kedova, Kembangan, Cengkareng, Kapuk, and Bojong Indah villages. In Central Jakarta there are Kwitang, Gunung Sahari, RSAL Bendungan Hilir, East Jakarta Sunter River and Cipinang River Cipinang area, Cipinang Muara, Jatinegara Kaum, Ciliwung River, Bidara Cina (Gunawan, 2010). The flood that occurred in Jakarta in 2007 was one of the biggest floods in which nearly 60 percent of the Jakarta area was flooded and had caused a lot of casualties, the victims who died from flooding about 8 people and increased to 19 people in January 2014, 4 people were killed because smoke from *genset* while 15 other victims due to illness, washed away, electrocuted, fell and drowned (BNPB, 2014). In addition, flooding is also detrimental in various sectors, many people are hampered work due to not being able to access the road because it is traversed by floods, school children whose school buildings are flooded and forced to follow the activities of teaching and learning activities elsewhere, as well as the emergence of various diseases such as itching, leptospirosis, ARI, etc.

Disaster preparedness efforts are not only conducted by the government, the society itself also needs to prepare disaster preparedness to reduce the losses caused by the disaster. Disaster preparedness can be defined as an effort that allows governments, organizations, communities and individuals to respond to disaster events quickly and effectively (Carter, 2008). Preparedness efforts for each individual or group are not the same depending on the level of disaster preparedness influenced by social demographic factors, social networking, and previous flooding experience (Lindell and Perry, 2000 in Kirschenbaum, 2002). The knowledge level of disaster preparedness for each individual is different - so that it will generate a variety of responses as individuals face emergencies due to natural disasters.

A good level of knowledge will contribute to the creation of a sense of security and minimization of disaster victims. In this case, the community already has initiatives in facing disaster threat in DKI Jakarta province, especially flood. These efforts are manifested in various forms of activity. From the start of community awareness, mapping of disaster prone



areas, making and preparing evacuation routes, early warning of floods, forming disaster prepared groups and so forth (BPBD DKI Jakarta, 2013).

Research on flood disaster in Jakarta is already done a lot, but in terms of experience on community preparedness efforts in the face of flood disaster has never been done. Especially for the nursing profession working in community settings that play a role in health efforts in preventive measures of flood disaster management programs. The role of community nurses as implementers of health in achieving health goals through promotive and preventive efforts in relation to improving public health status (Iqbal & Nurul, 2009).

This research was conducted in flood affected areas, namely RT 001 RW 012 Bintaro Village, Pesanggrahan Subdistrict, South Jakarta with the number of 57 households affected by the flood (Population Report RT 001 RW 012 in 2014). Based on its severity, from 8 neighborhoods located in RW 012 Bintaro urban village, RT 001 is a frequent flooded area and there is no research about flood at this area. The researcher also thinks that the flood preparedness effort for the community is important to be studied, so the researcher is interested to study more deeply about "Phenomenological Study: The Experience of Society in Dealing with Floods at RT 001 RW 012 Bintaro Urban Village the District of Pesanggrahan South Jakarta in 2015".

2. LITERATUR REVIEW

According to Indonesia National law number 24 of 2007, disaster is defined as an event or series of events that threaten and disrupt the lives and livelihoods of the community caused by both natural and / or non-natural factors and human factors resulting in the occurrence of human casualties, environmental damage, property loss, and psychological impact. The Great Dictionary of Indonesian defines disaster as something that causes misery, harm, or suffering, accidents and dangers. WHO (2002) defines disaster as an event that causes damage, ecological disturbance, loss of human life, or worsening health or health care on a certain scale requiring response from outside the affected community or region. From some sense of disaster, it can be drawn the conclusion of a disaster is an event or event that unexpected consequences of natural and non-natural that can threaten the survival.

While flooding is one type of natural disaster that exists. Flood is defined as a condition in which an area is inundated by water in such large quantities (Ramli, 2010). Furthermore, flooding according to Yulaelawati and Usman (2008) is the overflow of river flow due to water exceeds the capacity of river catchment so that overflow and inundate the plains or lower areas around it. MOH (2014) defines flooding as an event in which water inundates an area that is not normally inundated with water over a period of time, caused by continuous rain, resulting in overflow of river / lake / sea / drainage water as the stream exceeds the volume of water that can be contained in, rivers, lakes, swamps, and other waterways. From some sense of flood above the author can conclude that the flood is the rise of the water surface due to continuous rain caused by the high surface volume of the river and cause losses.

The cause of the flood basically can be divided into 3 (three) factors (Yulaelawati & Usman, 2008), namely:

- 1. Effect of human activity, such as:
 - a) Utilization of floodplains used for settlements and industry



- b) Deforestation and which subsequently reduce soil absorption and increase surface runoff
- c) Settlements in floodplains and development in floodplain areas by altering unplanned water channels
- d) Throwing litter can clog waterways, especially in housing
- 2. Natural conditions that are fixed (static) such as:
 - a) Geographical conditions that are located in areas that are often exposed to storms or cyclones
 - b) Concave topography conditions, which are floodplains
 - c) River flow conditions, such as flat river slope, winding, bottle neck, and river sedimentation form an island (river ambal)
- 3. Natural events that are dynamic, such as:
 - a) High rainfall
 - b) The occurrence of damming or backflow that often occurs at the mouth of the river or meeting the big river

BNPB explains some of the causes of flooding in Jakarta, including:

- a) Drainage system that is not functioning optimally and the clogging of rivers and waterways by garbage.
- b) Construction of residential buildings on wetlands or water catchment areas and the increasingly dense physical development causes the ability of soil to absorb water becomes greatly reduced,
- c) Construction of flood control facilities and facilities that have not functioned optimally,
- d) Floods also occurred due to rob that hit some areas located in the northern coast of DKI Jakarta including Kamal Muara, Pluit, Penjaringan, Kalibaru, Cilincing and Marunda.

Mistra (2007) revealed that the impact of floods will occur on several aspects with severe damage levels in the following aspects:

- a) Aspects of Population, among others in the form of casualties / death, drifting, drowning, injuries, lost victims, displacement, outbreak and isolated population
- b) Aspects of Government, among others, in the form of damage or loss of documents, archives, equipment, office supplies and disruption of government.
- c) Economic aspects, such as loss of livelihoods, malfunctioning of traditional markets, destruction, loss of property, livestock and disruption of the economy of the people.

Preparedness is a series of activities undertaken to anticipate disasters through organizing and through appropriate and efficient measures (BPBD DKI Jakarta, 2013). According to BNPB (2008) disaster preparedness is a sustainable cross-sectoral activity. Flood preparedness consists of activities that enable communities and individuals to act quickly and effectively in the event of a flood. This helps the community in shaping and planning what actions need to be taken when flooding (UNESCO, 2008).

The specific objective of disaster preparedness is to ensure that appropriate systems, procedures and resources are available in their respective places to provide immediate and effective assistance to disaster victims so as to facilitate recovery and rehabilitation of services (BNPB, 2008).



RESEARCH METHODS

This research is categorized as a qualitative research with descriptive phenomenology approach. Qualitative research is an approach or exploration to explore and understand a central symptom (Creswell, 2012). According Moleong (2013) qualitative research is research that intends to understand the phenomenon of what is experienced by the subject of research such as behavior, perception, motivation, action and others. In this qualitative study, where the focus is understanding the meaning of experience from an individual perspective (Houser, 2011). In line with that, qualitative methods are used to obtain in-depth data, a data that contains meaning. Meaning is the actual data, the exact data which is a value behind the visible data (Sugiyono, 2011). Qualitative methods used in this study are observations, group discussions, interviews or document reviewers.

Phenomenology is defined as a study to give an idea of a meaning from the experiences of some individuals about a particular concept (Polkinghorne 1989 in Herdiansyah 2015). The purpose of phenomenological research is to explain what experiences experienced by people in this life, including their interactions with others (Danim, 2003). The researcher combines the validation result data to the participant description of the results of the analysis.

This research was conducted at RT 001 RW 012 Bintaro Urban Village, Pesanggrahan Sub District, South Jakarta on July 2015. The number of people affected by flooding in RT 001 RW 012 Bintaro village is about 57 families (Head of Family) (Population Report RT 001 RW 012, 2014).

Informants in this study were people whose affected by flood in the area of *RT* 001 *RW* 012 Bintaro urban village. Informants in this study were selected by using the technique of Purposive sampling, with the principle of appropriateness (appropriateness) and adequacy (adequancy). The technique of purposive sampling is sampling technique with data source in certain consideration (Sugiyono, 2010).

Informants means individuals who provide information in answering research questions. The determination of this sampling technique or informant depends on the topic and purpose of the research itself. The informants's criteria in this study are:

- a) Informants interviewed are in one family,
- b) The informant is a part of community in RT 001 RW 012 and has experienced flooding,
- c) Can communicate in the excellent way so that it can answer all questions from the researcher.

Data collection is the stages of study by searching and collecting data from informants or samples. With regard to data collection efforts, there are at least two things that really determine the quality of data, namely data collection techniques and tools (instrument) used (Sugiyono, 2005). Data collection techniques involve standard procedure methods, such as in-depth interviews, focus group interviews and observations.

The data can be declared valid if there is no difference between the researchers reported within the actual thing to the object under study (Sugiyono, 2011). In qualitative research, many research results are doubtful because several things, such as subjectivity of dominant researchers in research, research tools used are interviews and observations that have weaknesses because it is done openly and without control (participatory observation),



and the source of qualitative data is less credible will affect the results of research accuracy (Bungin, 2011). Therefore, to avoid the invalidity and non-conformity of the research instrument then tested the validity and test of credibility. Validity test in qualitative research includes test, credibility (internal validity), transferability (external validity), dependability (reliability), and objectivity (Sugiyono 2011, Moleong 2013).

Data analysis is the process of searching and systematically compiling data obtained from interviews, field notes, and documentation, by organizing data into categories, breaking into units, synthesizing, arranging into patterns, choosing which ones are important and which will be studied, and make conclusions so easily understood by yourself and others (Sugiyono 2013). Qualitative data analysis (Bogdan & Biklen, 1982 in Moleong 2013) is an effort conducted by working with data, organizing data, sorting it into manageable units, populating it, searching and finding patterns, finding what is important and what is learned, and decide what can be told to others. In this study researchers used analysis techniques according to (Streubert & Carpenter, 2003).

RESULT AND DISCUSSION Result

This research produces four themes. Some of them have sub themes with certain categories of meaning. The theme is identified based on the research objectives. The following explanations in detail for each theme resulting from this research are:

E.1 The Impact of Floods Experienced by The Community

Due to continuous rain caused by the high surface volume of the river can result in flood disaster. Every disaster including floods, of course, has a variety of impacts. This study has found the impacts people feel due to floods include: 1) Damage of buildings and home furnishings; 2) Damage to places of worship; 3) Establishment of public awareness; 4) Becoming accustomed; 5) Communities are able to predict the arrival of floods by themselves; 6) Feelings which are felt by the victim.

The impact of floods experienced by the community one of them caused damage. The results of this study found that there is damage to buildings and home furnishings, where the community residence was damaged to result collapse due to heavy flow of water and submerged goods such as television and refrigerator. This result was in line with research conducted by Nurhaimi and Rahayu (2014) reported the impact of the flood they felt was the destruction of house building. This is also in line with research conducted by Jurenzy (2011) which states as many as 76.67 percent of respondents chose the result of the flood is the drift of various goods and property. The losses experienced by the average respondents are the drift and destruction of valuables such as electronic goods and household appliances.

Kodoatie and Syarief (2006) provide some examples of the impacts or losses of floods such as loss of life or injury, loss of property, destruction of settlements, destruction of trading areas, damage to industrial areas, damage to agricultural areas, damage to drainage and irrigation systems, fire, road damage, bridges and airports, damage to telecommunication systems.

The impact of floods are not only damage the buildings, but also has physical impacts on public facilities and infrastructure such as educational facilities, health, religious facilities and public services. In this study, it was found that when the big flood came, the flood water



could hit around the mosque hall to a height of 1 meter. In this case, to restore the function of public services, rehabilitation is required. According to BNPB (2013) rehabilitation aims to restore and restore urgent building and infrastructure functions to follow up emergency response stages, such as the rituals of religious buildings, school buildings, basic social infrastructure, and much-needed economic infrastructure.

In this study, there are two out of six informants revealed the incidence of floods made them become accustomed to taking preparedness action. This is in accordance with the results of Sagala (2014) study which reported the long history of flood disaster in Baleendah Sub-district has made the community accustomed to take various actions to reduce their risk. Similar thing is also found in the study that Awaliyah et al (2014) that people's knowledge in disaster mitigation after high category floods because most people already consider that flood disaster has become a routine habit that occurs during the rainy season, this habit has been happening in a long time so that they consider the flood disaster has become a disaster their subscription. Clust, Human & Simpson (2007) argue that individuals will adapt and learn while engaged in disaster situations so that the threat of disaster will be responded to more seriously and more effectively in the future.

The impact of the floods also allows the public to predict the arrival of floods so that the community can take action early on to reduce the impact caused. This is in line with research conducted by Jurenzy (2011) in Katulampa Village who reported that when there are signs of flooding, the status of river height has reached alert 4 most respondents say they will move their valuables to the place safer. The results of this study are also reinforced by Dodon's (2013) study which revealed that most societies make the duration of rain fall as a source of information based on their experience in dealing with floods.

Communities also need an early warning system including warning signs and information distribution in the event of a disaster. A good early warning system can reduce the damage suffered by the community (Gissing in Sagala, 2014). A good system is a system in which the public also understands the information to be provided by the early warning sign or knows what to do if at any time the early warning signs are sounded (Sutton and Tierney, 2006).

The response of the community in the face of the flood disaster is very diverse, depends on their experience of floods perceived by each individual. Psychologically one of the responses expressed by society can be described through feelings, feelings that arise in society can provide a real picture of feelings that are felt during a flood. According to Yulaelawati & Usman (2008) the experience felt by individuals during a disaster can make a person traumatized to disaster, the response shown to make someone translate through expressions of response and expression, such as anger, sadness, loss, or depression.

Flood also should make people aware of the impact (Rohman & Suroso, 2012). The impacts experienced by the community, especially social impacts and economic impacts directly affect the public attitudes toward existing disasters. Communities make economic and social impacts as their most important consideration in dealing with floods (Sagala, 2014). Based on the results of this study, according to the researchers various flood impacts have been experienced by the community when there is flooding, for it takes precautionary measures to reduce the impact caused.



E.2 Source of Knowledge About Flood Prevention Program for the Society

Knowledge was defined as a fact or condition of knowing something with a certain degree of understanding through experience, association, or relationship (Mohanty et al, in Pangesti, 2012). Knowledge of disasters is one of the main reasons for a person to carry out any safeguards or preparedness efforts (Sutton and Tierney, 2006). In this study, the source of knowledge gained by the community on flood preparedness was obtained from the experience of flood, television and newspaper mass media, insights from the Search and Rescue (SAR), local government, and Non-Governmental Organizations (NGOs).

Experience could be used as one way to gain the truth of a knowledge (Pangesti, 2012). In this study, there are five out of six informants revealed what they knew when the first flood disaster was done according to their experience was evacuation. Dodon (2013) who conducted the research in Baleendah Village found that their preparedness was obtained based on their personal experience in the face of the flood disaster that repeatedly hit their territory.

However, this was contrardictory to the results of the Takao research, et al (2004) which states that the experience of flooding has no link in improving disaster preparedness efforts. These results are also in line with research conducted Rohman and Suroso (2012) said that the household experience of previous flood events did not determine the action of preparedness in anticipating the disaster. Communities have their own understanding of the floods they have experienced over the years, with the experience of these flood events making the community take action preparedness based on people's knowledge of the flood they have experienced.

Each individual will differ in ways of interpreting knowledge about community preparedness efforts (PROMISE, 2009). In this research, it was found that two of six informants said that knowledge about flood preparedness effort was obtained from mass media such as newspaper and television. Yuwanto et al (2014) revealed the media has an important role in natural disasters, through the media information about natural disasters can spread to various parts of the world. Information on the types of disasters, information on when the disaster occurred, information about disaster areas, impacts, and needs of natural disaster victims can be recorded and delivered through the news.

Natural disaster information in Indonesia is could be used from media center. This Mediacenter as a new disaster information center also serves as an educational media for the community that provides information on the procedures and technical handling of natural disasters, as well as a media socialization of disaster prone areas of Indonesia (media center, 2014). Communities can access information on flood preparedness through print and electronic media such as books, newspapers, magazines, internet, radio and television.

The government in is closely related in providing information on flood preparedness for the community. An informant revealed that he/she obtained knowledge about flood preparedness obtained from SAR team and flood post by giving insight in doing first aid. This is in line with the research undertaken by Dodon (2013) who reports disaster information sources coming from the instructions of the hamlet head and RT/RW devices as well as the local government officers. They claimed to receive preparedness materials that were held starting from the Citarum River Region Central Office and SAR Team. Government Regulation



Number 36/2006 concerning the search and rescue, the SAR (which includes efforts and activities of seeking, rescuing and rescuing lost or dangerous human lives in shipping, and / or aviation, or other disasters or disasters) is coordinated by National Search and Rescue Agency (BASARNAS) who is under and directly responsible to the President.

E.3 The Efforts of Community Preparedness in the Implementation of Flood Disaster

Disaster hazards can occur anywhere, anytime with or without warning, so that it is very important to be prepared for disaster to reduce the risk of impact. Gregg (2004) explains that preparedness aims to minimize the side effects of hazards through effective, timely, adequate, effective emergency response measures for emergency response and disaster relief. Community actions include cleaning up the environment and disposing of garbage, self-evacuation, raising things, cleaning floors and furniture.

One effort that can be undertaken by the community in preventing the occurrence of flood disaster is to determine the steps to face the flood disaster (Dodon, 2013). In this study, two informants took action to clean the environment and dispose of garbage in its place as a flood disaster prevention measures. Research conducted Jurenzy (2011) reported on the knowledge of respondents in reducing the risk of flood that is as much as 73.33% of action taken is to throw garbage in place. Cleaning up the environment and disposing of garbage in its place is one that can be done by the community as a flood prevention measure so that it can reduce the risk of flood disaster.

The impact of natural disasters generally cause various damages and losses. The damage and loss of this natural disaster prompted the community to take action to minimize the damage / damage that existed (Lindell and Whitney, 2000). In this study the results showed that all informants revealed that the first preparedness effort was self evacuation. The same study conducted by Nurhaimi and Rahayu (2014) reported that almost all respondents in his study said the actions taken during the flood were displaced either to a refuge, relatives house, or other safe house. Real disaster preparedness must be owned by individuals is disaster preparedness to save themselves, help family members, friends, and local people when disaster occurs (Kapucu, 2008).

E.4 The role of Government in Dealing with Flood Disaster

The problem of flooding is not only the problem of people affected by the flood but also the problem for the local government. Disaster preparedness can be defined as an effort that allows governments, organizations, communities and individuals to respond to disaster events quickly and effectively (Carter, 2008). As well as community preparedness, the government has an important role in flood disaster mitigation. According to the Act. No. 24 of 2007 on disaster management states that disaster management is a series of efforts that include the establishment of disaster-prone development policies, disaster prevention activities, emergency response and rehabilitation. In this research, flood prevention that has been done by the government is the making of embankment, dredging times, procurement of pump house, residential relocation, flood prevention team, public kitchen and logistic, procurement of flood tools and health service at health center.

Flood reduction solutions implemented in Indonesia still need to be improved. Flood reduction solution that has been conducted by the government that is making the embankment. This is in line with the theory put forward by Plate (2002) that disaster risk reduction solutions are carried out with a classical and structural technical approach where



flood problems can be solved by hydrological methods, such as hydrological studies on flood hazards and completion of infrastructure development (water channels, giant embankment making, etc.).

In addition, in reducing flood risk, structural approaches can be made by modifying the environmental structure through the construction of embankments on riverbanks; repair of channels (pendulum, drainage lines, reservoirs and methods to accelerate or slow the flow of water, deepen and straighten or widen the channel); land improvement (gutter control, modification of cropping practices, soil conservation, revegetation and slope stabilization) (Sagala, et al 2014).

The Jakarta Emergency Drugging Initiative (JEDI) project or flood control project through normalization and dredging of 13 rivers in Jakarta begins in mid-2012. Pesanggrahan River along 27 kilometers from Cirendeu to Cengkareng is normalized. The widening of the river body was successfully conducted from the original 15 m to 40 m, the Pesanggrahan River widening is accompanied by the construction of a concrete embankment along the river body with a height of 3 m and also river dredging (Rezza, 2011). All informants in this study revealed the efforts made by the government in reducing the impact of the flood disaster that is dredging times that people consider very useful to reduce the damage that occurred.

According to Danapriatna (2009), one of the way to reduce the occurrence of floods is to increase the capacity of existing channels. Improvement work and river flow arrangements are intended to increase the carrying capacity of the natural course, or allow the elevation of the flood waters to be lower than that occurring naturally. Darsono's repair and regulation works in Danapriatna (2009) involves the following: Deepening and or widening the flow (including dredging); (b) reduce roughness of the groove; (c) the flowing or shortening of the flow (sodetan); (d) adjust flow patterns; (e) erosion control; (f) dredging.

Disscussion

This chapter describes several parts related to the research results that have been obtained. The first part describes the discussion of the research results, namely comparing them with concepts, theories, and various previous studies, which are related to the results of this study to strengthen the discussion and interpretation of the research results. The second part describes various limitations during the research process by comparing the experience during the research process that has been carried out with the process that should be carried out according to the rules. The third part describes the implications of the research according to the research results that have been carried out for nursing science both in services and the development of science and nursing education.

A. Interpretation of Research Results and Discussion

This study produced four themes. Some of them have sub-themes with several specific meaning categories. These themes were identified based on the research objectives. The following is a detailed explanation of each theme produced by this study:

F.1 The impact of flooding experienced by the community

As a result of continuous rain caused by the high surface volume of the river, it can cause flooding disasters. Every disaster, including floods, of course has various impacts, on this study shows the impacts felt by the community due to flooding, including: 1) Damage to



buildings and household furniture; 2) Damage to places of worship; 3) Formation of community awareness; 4) Becoming accustomed to; 5) The community is able to predict the arrival of floods themselves; 6) Feelings felt

Damage to buildings and home furnishings

The impact of flooding experienced by the community is one of which causes damage. The results of this study found that there was damage to buildings and home furnishings, where people's homes were damaged to the point of collapsing due to the strong currents of water and submerged items such as televisions and refrigerators. This is in line with research conducted by Nurhaimi and Rahayu (2014) who reported that the impact of the flood they felt was damage to house buildings. This is also in line with research conducted by Jurenzy (2011) which stated that 76.67 percent of respondents chose the result of the flood as the washing away of various goods and possessions. The losses experienced by respondents on average were washing away and damage to valuables such as electronics and household appliances.

Kodoatie and Syarief (2006) provide several examples of the impacts or losses of flooding, including loss of life or injury, loss of property, damage to settlements, damage to commercial areas, damage to industrial areas, damage to agricultural areas, damage to drainage systems and so on irrigation, damage to roads and railways, damage to highways, bridges and airports, damage to telecommunications systems.

Damage to places of worship

The impact of flooding not only damages buildings, but also has a physical impact on public facilities and infrastructure such as educational facilities, health, places of worship and public services. In this study, it was found that when a major flood comes, flood water can hit the mosque hall up to a height of 1 meter. In this case, to restore the function of public services, rehabilitation is needed. According to BNPB (2013), rehabilitation aims to restore and restore the function of buildings and infrastructure that are urgently needed to follow up on the emergency response stage, such as the rehabilitation of places of worship, school buildings, basic social infrastructure, and economic infrastructure and facilities that are very much needed.

Get used to it

In this study, two out of six informants stated that flooding incidents made them accustomed to taking preparedness measures. This is in accordance with the results of Sagala's (2014) study which reported that the history of flooding disasters that had occurred for a long time in Baleendah District had made the community accustomed to taking various actions to reduce the risks they experienced. Similar things were also found in the study by Awaliyah et al. (2014) which showed that public knowledge in disaster mitigation after flooding is in the high category because most people already consider flooding as a routine that occurs during the rainy season, this habit has been going on for quite a long time so that they consider flooding as their regular disaster. Clust, Human & Simpson (2007) argue that individuals will adapt and learn while being involved in a disaster situation so that the threat of disaster will be responded to seriously and more effectively in the future.

The community is able to predict the arrival of floods themselves

The impact of flooding allows people to predict the coming of flooding so that they can take early preparedness measures to reduce the impacts caused. This is in line with research



conducted by Jurenzy (2011) in Katulampa Village which reported that if there were signs of a flood, namely the river height status had reached alert 4, almost all respondents stated that they would move their valuables to a safer place. The results of this study were also reinforced by research by Dodon (2013) which revealed that most people use the intensity of the duration of rain as a source of information based on their experience in dealing with flood disasters.

The community needs an early warning system including warning signs and information distribution if a disaster is about to occur. A good early warning system can reduce the damage experienced by the community (Gissing in Sagala, 2014). A good system is a system where the community also understands the information that will be provided by the early warning sign or knows what to do if at any time the early warning sign of a disaster sounds/turns on (Sutton and Tierney, 2006).

Feelings felt

The community's response to flood disasters varies widely, according to the flood experience felt by each individual. Psychologically, one of the responses expressed by the community can be described through feelings, feelings that arise in the community can provide a real picture of the feelings felt when a flood occurs. According to Yulaelawati & Usman (2008) the experience felt by individuals when a disaster occurs can make someone become traumatized by the disaster, the response shown makes someone translate through expressions of response and expression, including anger, sadness, loss, regret to depression. Flood events should make people aware of the impacts they cause (Rohman & Suroso, 2012). The impacts experienced by the community, especially the social and economic impacts, directly affect the community's attitude towards the disaster. The community make economic and social impacts their primary consideration in dealing with flood disasters (Sagala, 2014). Based on the results of this study, according to researchers, various impacts of flooding have been experienced by the community when flooding occurs, for this reason preventive measures are needed to reduce the impacts caused.

F.2 Sources of knowledge of flood management programs

Knowledge as a fact or condition of knowing something with a certain degree of understanding through experience, association, or relationship (Mohanty et al, in Pangesti, 2012). Knowledge of disasters is the main reason for someone to carry out protection activities or existing preparedness efforts (Sutton and Tierney, 2006). In this study, the source of knowledge obtained by the community regarding flood disaster preparedness was obtained from the experience of going through floods, television and newspaper mass media, insights from the SAR Team. counseling from the RT or sub-district and the Non-Governmental Organization (NGO) Dompet Dhuafa.

Experience of going through a flood event

Experience is one way to obtain the truth of knowledge (Pangesti, 2012). In this study, five of the six informants revealed what they knew when the flood disaster occurred, which was first carried out according to experience they are evacuation. Dodon (2013) who conducted research in Baleendah Village found that the preparedness they carried out was based on their personal experience in dealing with flood disasters that repeatedly hit their area.



However, this is in contrast to the results of Takao et al.'s (2004) study which stated that flood experience has no relationship in increasing disaster preparedness efforts. This result is also in line with the study conducted by Rohman and Suroso (2012) which stated that household experience regarding previous flood events does not determine preparedness actions in anticipating disasters. The community has its own understanding of the floods they have experienced for years, with this flood experience making the community take preparedness actions based on community knowledge of the floods they have experienced.

Television and newspaper mass media

Each individual will have a different way of interpreting knowledge about community preparedness efforts (PROMISE, 2009). In this study, it was found that two out of six informants said that knowledge about flood preparedness efforts was obtained from mass media such as newspapers and television. The results of this study are in line with research conducted by Dodon (2013) which reported that the source of disaster information obtained by the community came from invitations neighbors, instructions from community leaders, TV and radio news, and flyers/newspapers. Yuwanto et al. (2014) revealed that the media has an important role in natural disasters, through the media information about natural disasters can be spread to various corners of the world. Information about the type of disaster, information about when the disaster occurred, information about the location of the disaster, the impact, and the needs of victims of natural disasters can be recorded and conveyed through news reports.

One of the centers of natural disaster information media in Indonesia is the media center. This media center, in addition to being a center for the latest natural disaster information, also functions as an educational media for the community that provides information on procedures and techniques for handling natural disasters, as well as a media for socializing disaster-prone areas in Indonesia (media center, 2014). The public can access information on flood disaster preparedness through print and electronic media such as books, newspapers, magazines, the internet, radio and television.

Insights from the SAR Team

The government in this case is closely related to providing information on flood disaster preparedness for the community. An informant revealed that he obtained knowledge about flood preparedness from the SAR team and the flood post by providing insight into providing first aid. This is in line with research conducted by Dodon (2013) which reported that the source of disaster information came from instructions from hamlet heads and RT/RW apparatus and Kelurahan officers. They stated that they received preparedness materials held starting from the Citarum River Basin Center (BBWS Citarum), TNI and the Bandung Regency SAR Team. Government Regulation Number 36 of 2006 concerning search and rescue, the implementation of SAR (which includes efforts and activities to search, assist, and save human lives that are lost or in danger in shipping and/or aviation disasters, or other disasters or calamities) is coordinated by Basarnas which is under and directly responsible to the President.

Counseling from RT or Sub-districtOn the other hand, one of the informants also revealed that they obtained knowledge about flood disaster preparedness through RT or Kelurahan counseling. This is in accordance with the results of Jurenzy's research (2013) which stated that RT and RW play a very important role in helping the government to conduct



disaster management socialization to the community such as counseling, supervision training in building permits in accordance with regional spatial planning, holding special forums on disasters, helping to move flood-affected communities to evacuation areas, making warning signs and others.

Dompet Dhuafa disaster preparedness team

Disaster preparedness at the individual level can be measured by three parameters, namely, knowledge, individual emergency planning, and capacity for mobilization resources (Rachmalia in Pangesti, 2012). Individual disaster preparedness is also indicated by the existence of knowledge, skills, and abilities obtained through the learning process from experiences that are applied in real conditions during emergencies (Clust, Human & Simpson, 2007). NGOs (Non-Governmental Organizations) are one source of information that the community obtains regarding flood preparedness efforts. This is in accordance with research conducted by Jurenzy (2011) which found that of the 30 respondents who experienced flood disasters, 23.33 percent of respondents had participated in flood mitigation training, while only 16.67 percent had participated in flood disaster education.

In this study, the community tried to find information through counseling. Counseling held by NGOs related to flood disaster preparedness. Efforts that can be made by the community in dealing with flood disasters include developing themselves by participating in training in dealing with disasters, such as first aid training in emergency response conditions (PROMISE 2009).

According to LIPI UNESCO/ISDR (2006), individual and household preparedness to anticipate natural disasters, especially floods, is the one of knowledge and attitude towards disaster risk, Knowledge is the main factor and becomes the key to preparedness. From the results of the focus group discussion (FGD) regarding the sources of knowledge obtained by the community in dealing with flood disasters, it is still not optimal in its application, the government is expected to provide serious education to the community in terms of preparedness through health promotion, counseling, health education and simulation.

F.3 Community preparedness efforts in facing flood disasters

Disaster hazards can occur anywhere, anytime with or without warning, so it is very important to be prepared for disasters to reduce the risk of their impact. Preparedness according to Gregg (2004) aims to minimize the side effects of danger through effective, timely, adequate, efficient preventive measures for emergency response and assistance during disasters. Actions taken by the community include cleaning the environment and disposing of garbage, self-evacuation, lifting goods. cleaning floors and home furnishings.

Clean the environment and throw away rubbish

One of the efforts that can be made by the community to prevent flood disasters is to determine steps to deal with flood disasters (Dodon, 2013). In this study, two informants take action to clean the environment and dispose of garbage in its place as a flood prevention measure. Research conducted by Jurenzy (2011) reported that respondents' knowledge in reducing the risk of flooding was that 73.33 percent of the actions taken were to dispose of garbage in its place. Cleaning the environment and disposing of garbage in its place is one of the things that can be done by the community as a flood prevention measure so that it can reduce the risk of flooding.

Evacuate yourself



The impact of natural disasters generally causes various damages and losses. The damage and losses from these natural disasters encourage people to take action to minimize the losses/damage that exist (Lindell and Whitney, 2000). In this study, the results of the study showed that all informants expressed that the first preparedness effort was self-evacuation. The same study conducted by Nurhaimi and Rahayu (2014) reported that almost all respondents in their study said that the action taken during a flood was to evacuate to a refugee camp, a relative's house, or another safe house. The real disaster preparedness that each individual must have is disaster preparedness to save themselves, help family members, friends, and local residents when a disaster occurs (Kapucu, 2008).

Raise things

Preparedness is an effort carried out to anticipate the possibility of a disaster in order to avoid loss of life, loss of property, and changes in the community's life order in the future (Gregg et al., 2004; Perry and Lindell, 2008). In this study, most informants revealed actions taken in flood disaster preparedness, namely evacuating valuables to a safer place. The results of this study are also supported by research conducted by Jurenzy (2011) which states that community preparation in facing disasters, especially for securing valuables that they secure, are usually important letters, televisions, refrigerators, and others. This finding confirms the findings of Tokai in Dodon (2004) which states that people tend to take preparedness actions when the impact of flood disasters begins to threaten them.

Clean floors and house furniture

Preparedness efforts aim to ensure that the resources needed to respond to disaster events can be used effectively during a disaster and know how to use them (Sutton and Tierney, 2006). In this study, the actions taken by the community were cleaning floors and furniture and remove and clean the water and mud that had entered the house. People are troubled after the flood subsides with dirty, smelly, and messy houses. Cleaning the house after a flood according to Mistra (2007) includes, the flood has subsided, use safety equipment, turn off the electricity, maximize incoming air, throw away all food that has been exposed to flood water, remove all household furniture, paint the walls of the house, sterilize with disinfectant.

Preparedness has steps that allow different units, starting from individuals, households, organizations, communities, and societies to respond and restore normal conditions when a disaster occurs (Sutton and Tierney, 2006). Based on the results of this study, according to researchers, the importance of preparedness actions carried out by communities that have long lived side by side with flood disasters makes the community have their own preparedness in reducing the impacts they feel, but still needs to be improved in order to minimize the losses or damage caused.

Theme 4. The role of government in dealing with flood disasters

The problem of flooding is not only a problem for people affected by the flood but also a problem for the local government. Disaster preparedness can be defined as an effort that allows governments, organizations, communities and individuals to respond to disaster events quickly and effectively (Carter, 2008). As in the case of preparedness carried out by the community, the government has a very important role in flood disaster management. According to Law. No. 24 of 2007 concerning disaster management states that disaster management is a series of efforts that include determining development policies that are at



risk of disasters, disaster prevention activities, emergency response and rehabilitation. In this study, flood management that has been carried out by the Government includes the construction of embankments, river dredging, procurement of pump houses, relocation of settlements. Flood management teams, public kitchens and logistics, procurement of flood equipment and health services at health centers.

Embankment construction

Flood risk reduction solutions implemented in Indonesia still need to be improved. The flood risk reduction solution that has been implemented by the government is the construction of embankments. This is in accordance with the theory put forward by Plate (2002) that disaster risk reduction solutions are carried out with a classical and structural technical approach where flood problems can be solved with hydrological methods, such as hydrological studies on flood hazards and the completion of infrastructure development (examples: construction of canals, water channels, construction of giant embankments and others).

In addition, in reducing the risk of flooding, a structural approach can be taken by modifying the environmental structure through construction of embankments on riverbanks; channel improvement (pendulums, embankments, reservoirs and methods to speed up or slow down water flow, deepen and straighten or widen channels); soil improvement (gully control, modifying planting practices, soil conservation, revegetation and slope stabilization) (Sagala, et al 2014). River dredging The Jakarta Emergency Dradging Initiative (JEDI) project or flood control project through normalization and dredging of 13 rivers in Jakarta began in mid-2012. Pesanggrahan River along 27 kilometers from Cirendeu to Cengkareng underwent normalization. The widening of the river body was carried out from the original 15 m to 40 m, the widening of Pesanggrahan River was equipped with the construction of concrete embankments along the river body with a height of 3 m and also river dredging (Rezza, 2011). All informants in this study revealed the efforts made by the government in reducing the impact of flood disasters, namely river dredging which was considered by the community to be very useful in reducing the damage that occurred.

According to Danapriatna (2009) one way to reduce the occurrence of flood overflow is to increase the capacity of existing channels. The work of repairing and regulating river channels is intended to increase the transport capacity of natural channels, or to allow flood water elevations to be lower than those that occur naturally. The work of river channel improvement and regulation according to Darsono in Danapriatna (2009) concerns the following: (b) deepening and/or widening of channels (including dredging); (c) reducing channel roughness; (d) straightening or shortening channels (diversions); (e) regulating flow patterns; (f) dredging

Procurement of pump house

In this study, three out of six informants revealed another role of the Government, namely the provision of pump houses that function to reduce the discharge of river water during floods. To overcome the impact of flooding in Jakarta, the Jakarta government has prepared ways to overcome the dangers of flooding such as building reservoirs, socialization, training and others, while the creation of 2,000 infiltration wells by the DKI Regional Government and repair of water pumps in various locations were carried out to reduce the impact of flood disasters (BPBD DKI Jakarta, 2013)



Residential relocation

Research conducted by Harliani (2014) reported that the majority of respondents who had ordinary social ties were not aware of the government's relocation plans, whereas respondents who had very close social ties with their neighbors mostly answered that they knew about relocation plan from the government. However, in this study all informants mentioned the issue of residential relocation that will be carried out on some of the houses around the Pesanggrahan riverbank.

Population relocation is also one of the policies commonly implemented by the government to protect the community from the threat of natural disasters, and even become a popular solution in disaster management (Whiteford and Tobin, 2004). One of the failures that occurred in implementing this relocation program was the lack of community participation in decision-making, this is a challenge for the government in officially and evenly socializing the settlement relocation plan to the entire community so that there is no confusion regarding information or understanding of the relocation planned by the government.

Flood response team Satkorlak

In this study, four out of six informants said that in the RT 001 area of Bintaro Village there was already a flood response team, Satkorlak. In line with the results of Jurenzy's research (2011) which reported that during the emergency response period, the local government formed a rescue team consisting of SATKORLAK (Implementation Coordination Unit) and RT heads whose function was to help the community during the emergency response period such as evacuation to a safer place and ensuring the safety of other family members. When floods occur, Satkorlak carries out rescue operations, closes leaking or overflowing embankments, and only after the flood occurs does it repair the damage caused by the flood (Adhi, 2010).

Public kitchen and Logistics

The results of this study state that the government in terms of flood preparedness provides assistance such as providing public kitchens and logistics, the assistance is obtained from the government or community self-help in the form of mineral water and snacks. Research conducted in Gresik Regency by Rohman & Suroso (2012) on 156 respondents found that most households (69%) answered that they had never prepared reserves and food before the flood occurred. The tendency of respondents to choose to disagree or disagree is due to the respondents' assumptions about the food supply itself. They stated that preparing food supplies is not too important because in the area prone to flooding there are many stalls that can provide basic necessities. In addition, based on the respondents' experience from last year's flood, the government usually provides a one-week supply of food to flood victims.

Supporting resources are one of the indicators of preparedness that consider how various existing resources are used to restore emergency conditions due to disasters to normal conditions (ISDR/UNESCO, 2006). Resources according to Sutton and Tierney (2006) divided it into 3 parts, namely human resources, funding/logistics resources, and technical guidance and material provision resources.

Procurement of flood equipment

Disaster preparedness is done by preparing oneself with effective equipment (Cappola, 2007) with the aim of improving safety and protecting human lives (Sutton and Tierney, 2006). Informants said that various tools have been prepared in dealing with flood



disasters such as rubber boats, ropes, water pumps and vehicles for ambulances. For flood management in the health sector, important facilities to use include medicines, consumables, sanitation materials, health equipment, field support facilities (generators, tents, identity, officers, communication equipment) and transportation (Nurul, 2010).

Community Health Center Services

The role of government in flood management, one of the important things is health center health services. Health center programs are very important in helping the community to reduce the impact of post-flood diseases. In disaster management in the health sector, basically no special facilities and infrastructure are formed, but using existing facilities and infrastructure, only the intensity of use is increased as with natural resources others (Ministry of Health, 2007). This is in line with Nurul's research (2010) reporting a picture of the preparedness of health human resources in dealing with health problems due to flood disasters in DKI Jakarta Province. In 2010, most (68.1%) of health human resources working in the Health Service in DKI Jakarta Province stated that they were ready to work in the face of flood disasters and 31.9% stated that they were not ready. One of the health resources working for the community is nurses, the role of community nurses as health implementers in achieving health goals through promotive and preventive efforts in relation to improving the health status of the community (Iqbal & Nurul, 2009).

Preparedness actions taken by the community are carried out after the community experiences great losses and damage due to natural disasters (Lindell and Whitney, 2000). So far, many people still rely on preparedness and mitigation to the government by ignoring their own personal preparedness (Matsuda and Okada, 2006).

Disaster risk reduction carried out by the government according to Sagala et al. (2014) needs to consider community preparedness in efforts to reduce the risk of flood disasters. The efforts made by the government so far have been so many, but floods still occur. The role of the community in this case needs to be increased so that the problem of flooding can be overcome, one of which is by not littering and erecting buildings on the riverbankriver

B. Limitations

Based on the experience of the research process, several limitations were found in the research. These limitations include:

- 1. Researchers have difficulty in controlling the ideas or opinions of informants
- 2. During the FGD, various opinions emerge which are difficult to limit, for this reason an interview guide is needed that can be used as a reference.
- 3. The delay in data collection was due to the difficulty in matching the informants' schedules.

CONCLUSION

This research was conducted to get an idea of the meaning of community preparedness experience in facing flood disaster. Based on the results of the research, the themes could identified in four different ways, namely:

1. Flood impact experienced by the community.

The impact of floods experienced by the community, among others, the destruction of buildings and home furnishings, damaging the public facilities such as worship facilities, people become accustomed to flood events, people are able to predict the arrival of floods





and responses experienced by the community such as feelings of anxiety thinking about the soul and property.

2. Source of knowledge of flood prevention program.

The sources of knowledge of flood prevention programs are experiences of floods that have been experienced, mass media such as newspapers and television, insights from the Search and Rescue (SAR) Team, local government and Non-Governmental Organizations (NGOs).

- 3. The efforts of community preparedness in the implementation of flood disaster Community preparedness efforts in dealing with floods are cleaning up the environment and disposing of waste in place, self-evacuation, raising goods to safer places, and cleaning up dwellings from water and flooded mud.
- 4. Government's role in dealing with flood disaster.

The final theme is the government's role in dealing with floods, such as dikes, dredging, procurement of pump houses, relocation of settlements, the establishment of flood prevention teams, the availability of public kitchens and logistics, the procurement of flood tools and health services at the local health center.

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HALAMAN INI SENGAJA DIKOSONGKAN