Abstract

Tidal floods affect the surrounding community not only on social, economic, environmental aspects, but also psychological aspects. This phenomenon becomes very important for families in achieving psychological well-being. The purpose of this study was to analyze the psychological well-being of families affected by tidal flooding. Quantitative methods were used in this research with cross-sectional study approaches. A total of 84 respondents were taken by purposive sampling. Spearman Rank and Kruskal Wallis correlations were used for data analysis. The result showed that the psychological well-being of respondents averaged 159.197.39 with the lowest value and the highest value of 228. The Kruskal Wallis test results obtained $\rho: 0.340 > 0.05$, meaning that there is no difference in psychological well-being in the three villages. The psychological well-being of families affected by tidal floods is in the low category, so it needs guidance, and cooperation between related institutions in handling psychological aspects.

Keywords: Tidal flood, family, psychological well-being.
stagnate on land. This phenomenon is classified as a natural disaster when it is associated with humans and their activities.

Tidal floods affect families not only on social, economic, environmental aspects, but also psychological aspects. The impact of tidal floods covers various aspects, namely the environment, clean water quality and economy (Putra and Marfai, 2012), as well as psychological impacts (Nurjanah, et al, 2011).

This phenomenon becomes very important in families in achieving psychological well-being. According to Ryff (1989), psychological well-being refers to one's feelings about the activities of daily life. These activities undertaken by individuals experience fluctuations in thoughts and feelings, which start from negative mental states to positive mental states.

Bartram and Boniwell (2007) explain that psychological well-being deals with personal satisfaction, self-esteem, joy, satisfaction and optimism, as well as enhancing and developing the talents and interests that individuals need. Keyes (2006) regulates psychological well-being in developing the ability and capacity to be a whole, working well and useful human being.

Ryff (1989), there are several factors that influence the psychological well-being of an individual, including: age, gender, socioeconomic, education and culture, social, religious, and personality support.

Ryff (1989), psychological well-being refers to one's feelings about the activities of daily life. These activities undertaken by individuals experience fluctuations in thoughts and feelings, which start from negative mental states to positive mental states. Individuals who have high psychological well-being are individuals who feel satisfied with their lives, positive emotional conditions, able to go through bad experiences that can produce negative emotional conditions, have positive relationships with others, are able to determine their own destiny without depending on others, controlling the conditions of the surrounding environment, having a clear purpose in life, and developing himself
Shah & Mark (2004) referred to by Ribut P. (2016), explained that psychological well-being is not enough merely as happiness, but individuals can develop as whole human beings, fulfill their needs, and contribute to their environment. Individuals who have high psychological well-being can deliver to individuals who are aware of their exist meaningfulness.

Ryff (1989), there are six dimensions that make up the psychological well-being, namely the acceptance of self (self-acceptance), positive relationships with others (positive relations with others), autonomy (autonomy), control of the environment (environmental mastery), purpose life (purpose in life), and personal growth (personal growth).

Self-acceptance is a person's ability to accept himself as a whole, in the present and the past. Someone who evaluates themselves positively is an individual who understands and accepts various aspects of themselves, including good or bad qualities, can self-activate, function optimally and be positive towards the life they lead. Individuals who judge themselves negatively prove dissatisfaction with their condition, feel disappointed with what happened in their past lives, have problems with their personal qualities and do not accept themselves as they are (Ryff, 1995). Dodge, et al (2012) psychological well-being is achieved when individuals are able to bring together physical, social and psychological strength to solve problems with a balanced principle.

Positive relationships are the ability of individuals to establish good relationships with other people around them. Individuals who are high in this dimension are individuals who are able to foster a warm and trustful relationship from others, have concern for the welfare of others, show empathy, affection, and understand the principle of giving and receiving in interpersonal relationships. Center for Disease Control and Prevention (2015), individuals at this level will be able to be productive in life and work, and have the desire to make a positive contribution to their homes. Individuals who are low in this dimension are individuals who feel isolated and frustrated in fostering interpersonal relationships, not willing to compromise with others (Ryff, 1995).
Autonomy is described as an individual to be free, but still able to regulate his life and behavior. Individuals with high autonomy, free and capable of self -determination (self-determination), as well as self-regulating behavior, able to make decisions, independent, resistant to social pressure, able to evaluate themselves. Individuals who are low in the autonomy dimension will strongly consider the expectations and evaluations of others, hold on to the judgment of others to make important decisions, and are easily influenced by social funding to think and behave in certain ways (Ryff, 1995). Durkheim (1925) referred to by Sunaryo K. (2007), independence as conformity to the moral principles of the group. Independence is the appearance of personal decisions based on knowledge of the consequences of various actions and the courage to accept the consequences of those actions. Maslow (1971) referred to by Sunaryo K. (2007), distinguishes insecure autonomy independence as selfish and secure autonomy behavior that fosters love and awareness of the benefit of life for others. Independence is not something that is separated from the relationship, but is formed because there is an awareness of the dependence between various motives and values that underlie the appearance of actions in interacting with others. Decisions and actions are not solely in the dimensions of space and time but also in the dimension of values.

Environmental control is the ability of individuals to regulate the environment, take advantage of opportunities in the environment, create and control the environment in accordance with needs. Individuals who are high in this dimension have confidence and competence in managing the environment. Individuals can control external activities in their environment, including managing daily life situations, being able to take advantage of opportunities, choose and create an environment that suits their needs. Individuals, who have a low mastery of the environment, will experience difficulties in regulating daily life, feel unable to change or improve the quality of the surrounding environment, and unable to take advantage of opportunities and opportunities themselves in the surrounding environment (Ryff, 1995). Compton W.C, (2005) referred to by Jati A. (2010), individuals who have a low dimension of environmental mastery are individuals who have difficulty in managing daily situations or events; feel unable to change or develop the context around; not aware of opportunities or opportunities around; has a weakness in controlling the outside world. The factors contained in this aspect of environmental mastery
are having the ability to manage and choose situations and environments that are conducive to achieving goals.

The purpose of life has a clear understanding of the purpose and direction of the conversation. People who have psychological well-being are people who find meaning in the journey (Ryff & Keyes, 1995). Furthermore Ryff (1989) describes individuals who have goals in high life, namely individuals who have goals and interrelations of life, have feelings about the meaning of life in the past and the future, hold beliefs in the purpose of life, obtain purpose and purpose in life. While individuals who have a low aspect of purpose in life, that is, individuals who only have a few goals in life, lack a sense of meaning in their lives, lack of direction in life, do not see past life goals and have no belief in the meaning of life.

Individuals who are high in the dimension of personal growth are described by the feeling of continuous growth in themselves, view themselves as individuals who are always growing and developing, open to new experiences, have the ability and realize their potential, can feel the improvement that occurs in themselves and his behavior all the time, and can turn into a more effective person and have increased knowledge. Saraswati (2019), explain personal growth, the process that is understood and activated, individuals strive for changes in certain things, in order to become a person who is better than before. Individuals who have low personal growth will feel themselves experiencing stagnation, do not see improvement and self-development, feel bored and lose interest in their lives, and feel unable to develop positive attitudes and behavior (good) (Ryff, 1995).

Ryff (1989), there are several factors that influence the psychological well-being of an individual, including age, gender, socioeconomic, education and culture, social, religious, and personality support. Differences in the level of psychological well-being in people of various age groups. The age group is divided into three parts, namely young (25-29 years), midlife (30-64 years), and older (> 65 years). In late adult individuals (older), have a high score on the dimensions of autonomy, positive relationships with others, environmental mastery, and self-acceptance, whiles the dimensions of personal growth and life goals have a low score. Individuals who are in
middle adulthood (midlife), have high scores on the dimensions of environmental mastery, autonomy, and positive relationships with others, on the dimensions of personal growth, life goals, and self-acceptance have low scores. Individuals who are in early adulthood have high scores in personal growth, self-acceptance, and life goals, while low scores on the dimensions of positive relationships with others, environmental mastery, and autonomy (Ryff, 1989). Ryff and Keyes (1995), increase the amount of a person’s age at the level of environmental mastery and autonomy. But in the dimensions of life goals and personal growth increases with age.

Women are more significant in the dimensions of relationships with others and personal growth is higher than men. The family from childhood has instilled in boys as aggressive, strong, rude and independent, while in girls it is portrayed as a person who is passive, and dependent, helpless, and sensitive to the feelings of others, this will be carried on until he leaves adulthood (Ryff, 1989).

Ryff (1989) states that differences in socioeconomic status in psychological well-being are closely related to one’s physical or mental health. Individuals from low economic status tend to be more easily stressed than individuals who have high economic status. (Adler, Marmot, McEwen, & Stewart, 1999).

According to Ryff (1995), the value system of individualism or collectivism has an impact on psychological well-being. Western culture has a high value in the dimensions of self-acceptance and autonomy, while eastern culture which upholds the value of collectivism has a high value on the dimension of positive relationships with others. Individuals who get social support, have a higher level of psychological well-being. Social support is defined as a sense of comfort, attention, appreciation. Support can come from anyone, family, friends, colleagues, or the surrounding environment. Asante (2012) in his research on HIV / AIDS sufferers found that the higher the level of environmental social support, the higher the level of psychological well-being sufferers of HIV / AIDS.

Religiosity factor is also related to the level of psychological well-being of a person (Green & Elliott, 2010). Individuals who have a high level of religiosity, have a high psychological well-being
as well. Individuals who have high religiosity are better able to interpret life events positively, so that their lives become more meaningful. Individuals who have a lot of personal and social competence are better able to establish harmonious relationships with the environment, *coping skills* effectively tend to avoid conflict and stress.

Flooding is an event of the overflow of water that floods the surface of the land with a height exceeding the normal limit. Flooding results in loss of life, loss of property and even crippling the economy to the government. (Susilo, Mulyadi, & Utami 2008).

Tidal floods include flooding, which is caused by the entry of sea water into the mainland. Marfai & King, (2008) referred to by Hardoyo et al, (2011), explained that flooding in coastal areas can occur through the process of rising tides, tidal waves, high river water flow, and rising sea level. The northern part of Pekalongan City is an area directly adjacent to the sea. This has the consequence of the fisheries sector being a leading sector that contributes greatly to the welfare of the community. Sloping topography, causing facilities and infrastructure to support the development and accessibility of well-developed areas, is also supported by employment and established institutions, making this region strategic and potential (Hardoyo, et al, 2011).

However, the facts prove that tidal floods cause various effects on one's (*psychological well-being*). Flood disasters can cause a variety of damage, both to the human system, the environment and property. Flooding will cause problems for the human system, physical, psychological, socio-cultural, psychosocial, and spiritual aspects that have been embedded since ancestors. In the property system, flooding will cause damage to houses, schools, formal and informal infrastructure, damage to business premises, damage to rice fields or ponds which will result in economic losses. While in the environmental system, floods will damage environmental facilities and infrastructure, such as roads, houses, clean water, electricity, and other public facilities (Nurjanah, dkk, 2011).

The situation will result in the disruption of one's welfare. Individuals will lose countless jobs, income, business and other losses. Such conditions can be causing disruption or declining welfare in the victim (Kardiyono & Harding, 2017) including family. Individuals who have high
psychological well-being are individuals who feel satisfied with their lives, positive emotional conditions, able to go through bad experiences that can produce negative emotional conditions, have positive relationships with others, are able to determine their own destiny without depending on others, controlling the conditions of the surrounding environment, having a clear purpose in life, and developing himself (Ryff, 1989).

Studies on the impact of flooding have been carried out by several previous researchers, including: Kadiyono and Harding (2017), researching the value of Sundae nose culture on improving the psychological well-being of the impact of landslides due to flooding, Hardoyo, et al (2011), examines the community adaptation strategy in dealing with the tidal flood disaster in Pekalongan City, Wati (2015 ) examine the relationship between Coping Stress and Subjective well being after the eruption of Mount Merapi, Marfai et al., (2014) examines the impact of coastal flooding and community adaptation. This research is different from the previous one, which examines psychological well-being in families affected by tidal flooding.

**Method**

The design of this study is correlational quantitative study that aims to determine the level of attainment of life welfare or psychological well-being. Respondents in this study were families affected by tidal flooding in Pekalongan City, obtained by purposive sampling techniques for 84 families from three villages determined based on socio-ecological differences. These villages include: Panjang Baru Village with a dense population of socio-ecologists with 28 respondents, Bandengan Village with agricultural socio-ecology with 28 respondents, and Krapyak Lor Village with pond socio-ecology, with 28 respondents.

The research questionnaire uses a scale that refers to the dimensions that shape psychological well-being that was developed by Ryff (1989) and has been adjusted by the researcher and has been re-tested for validity and reliability. Alpha-Cronbach value the questionnaire, including self-acceptance (0,90), positive relationships with others (0,88), autonomy (0,86), environmental mastery (0,85), purpose in life (0,88), and personal growth (0,89). The item examples are “I am
not afraid to voice my opinions even if they contradict most people's opinions”. “My decisions are usually not influenced by what other people do”. “For me, feeling satisfied with myself is more important than getting other people's agreement about me”.

Questionnaires that filled out by families was scored to illustrate the condition of psychological well-being. The score is categorized into high, medium, and low. The results of the questionnaire also illustrate each dimension of psychological well-being, to present a picture of psychological well-being affected by tidal flooding in Pekalongan City.

Spearman Rank correlation test was used to determine respondents' psychological well-being. Krustal Wallis test was used to find out psychological well-being among the three villages in the research location. Then the results are categorized into three, low (159 - 204), medium (205 - 250) and high (251-288).

Results

Psychological well-being

Results of research psychological well-being respondents obtained the following results:

Table 1

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Median</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological Well-Being</td>
<td>84</td>
<td>197.39</td>
<td>197</td>
<td>159</td>
<td>228</td>
</tr>
</tbody>
</table>

Table 1 above shows that psychological well-being respondents averaged 197.39 with a lowest score of 159 and a highest score of 228.
Differences Psychological Well-Being Based on the Village

Test Kruskal Wallis Area, it is used to determine the differences in Psychological Well-Being in the three villages affected by tidal flooding in North Pekalongan. Results of this research are as follows:

Figure 1

Dimension Psychological Well-Being

Figure 1. That level is the highest dimension of psychological well-being, environmental mastery and the lowest purpose in life

Table 2

Differences of Psychological Well-Being Based on the Village

<table>
<thead>
<tr>
<th>Village</th>
<th>Mean rank</th>
<th>Psychological Well-being</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bandengan</td>
<td>39,20</td>
<td>195,39</td>
<td>0,340</td>
</tr>
<tr>
<td>Panjang Batru</td>
<td>40,32</td>
<td>99,29</td>
<td></td>
</tr>
<tr>
<td>Krapyak Lor</td>
<td>47,98</td>
<td>200,61</td>
<td></td>
</tr>
</tbody>
</table>
Table 2. Shows that the test results Kruskal Wallis obtained \( \rho \) value: 0.340 > 0.05 so that there are no differences in psychological well-being respondents among the three villages taken as research samples.

Figure 2

Average Psychological Well-Being Respondents Based on Village

Figure 2. Above shows that psychological well-being respondents who came from Krapyak Lor village had the highest average of 200.31 and were slightly different from the average psychological well-being of respondents from the Bandengan village. It can be concluded that the average psychological well-being respondents are not significantly different.
Discussion

The results showed that psychological well-being respondents averaged 197.39 with the lowest value of 159 and the highest value of 228. This means that the psychological well-being of the family affected by the tidal flood is in the category of lowest.

This result showed that the psychological well-being of families affected by tidal flooding has not yet been achieved. Families still feel the trauma, the past is less pleasant. Daily activities are considered not something important, and do not know about the goals to be achieved in his life. The family also felt that no one wanted to listen to complaints that were felt as a result of being flooded considered not something important, and do not know about the goals to be achieved in his life. The family also felt that no one wanted to listen to complaints that were felt as a result of being flooded.

Individuals who have high psychological well-being are individuals who feel satisfied with their lives, positive emotional conditions, able to go through bad experiences that can produce negative emotional conditions, have positive relationships with others, are able to determine their own destiny without depending on others, controlling the conditions of the surrounding environment, having a clear purpose in life, and developing himself (Ryff, 1989).

The results of this study are in line with Nita et al, (2014) study that found flooding rob which affects changes in physical and building conditions will affect social economic activity. Furthermore, Marfai (2014) explained that tidal flooding had caused damage to houses, infrastructure, public facilities, ponds, rice fields and health services. While Kadiyono & Harding (2017), prove that psychological well-being victims of landslides are in the category of Low. This illustrates the condition of those who feel confused and do not know what to do in overcoming their problems after a disaster and continuing their lives.

Ryff (2008), psychological wellbeing is an individual's potential impetus as a whole, causing individuals to become resigned. This situation causes psychological well-being to be low, on the contrary, it can also be to improve living conditions, so that psychological well-being is high (Ryff & Keyes, 1995). Families affected by tidal floods are required to be able to adjust and pass
through bad experiences facing the phenomenon of tidal floods to be able to continue living in areas that are flooded by tidal flooding. Families need to adjust to the conditions faced today in carrying out daily activities. People who have less psychological well-being will face difficulties in living in locations affected by tidal flood disasters, but instead people who have good Psychological Well-Being will be able to deal with the phenomenon of tidal floods. Wati (2015) stated that individuals who have achieved psychological well-being will experience high life satisfaction. Puspitawati, (2013) subjective well-being of the family is a feeling of satisfaction and a feeling of gratitude for family members for their lives.

That level is the highest dimension of psychological well-being, environmental mastery and the lowest goal in life (Figure 1). The lowest dimension of the family affected by tidal flooding is the dimension of purpose in life. Feeling families do not have a goal to be achieved, the past is considered useless, and sure cannot make life more meaningful. This dimension describes the ability of individuals to find meaning in life based on personal experience. Families affected by tidal flooding in Pekalongan City do not have positive purposive in life. These results are in line with research conducted by Kadiyono & Harding (2017), who examined landslide victims in Ciloto-Cianjur

Kruskal Wallis test results obtained values $\rho: 0.340 > 0.05$ so that there is no difference in the psychological well-being of respondents among the three villages taken as research samples. This happened; some of the extended families living in the three villages were already familiar with the flood environment that took place every year. They have gained a lot of experience in dealing with floods, and are able to use optimal resources to achieve psychological well-being.

Figure 2 shows that the psychological well-being of respondents originating from Krapyak Lor Village has the highest average of 200.31 (tends to be low) and is slightly different from the average psychological well-being of respondents originating from Krapyak Lor Village (195.39), while the Panjang Baru village the lowest psychological well-being (99.29).

This tendency is caused by socio-ecological differences, in which the Panjang Baru village is a densely populated residential area. If there is a flood, it will experience a greater impact, damage to the environment such as settlements, and property, disruption of the economy,
damage to social facilities and worship. Meanwhile, the village Bandengan and Krapyak Lor psychological well-being tend to be sufficient. This is due to Bandengan and Krapyak Lor Sub-Districts which are paddy fields and ponds. If there is a tidal flood, it only loses investment in agriculture and ponds, not to the point of damaging the residence or house and its environment. This is consistent with the results of Marfai, et al (2014) research that tidal flooding has caused damage to houses, road infrastructure, public facilities such as schools and health services, sanitation, yard, fields, paddy fields and ponds. Conditions of damage and losses experienced by families affected by tidal flooding can trigger psychological disorders. Flooding can cause disruption or decline in well-being Kadiyono & Harding (2017), as well as psychological disorders (Nurjanah, 2011).

However, families affected by tidal flooding, have not fully had a positive attitude, have not been able to make their own decisions and have not been able to regulate and shape the environment that suits their needs. The family seems to have no meaningful purpose in life and try to optimize and develop their potential.

The limitations of this study are only analyze in general the dimensions of psychological well-being affected by tidal flooding, which presents the condition of the family in Pekalongan City. This research has not analyzed in detail the dimensions of psychological well-being of each family, and has not discussed any factors that affect the psychological well-being affected by tidal flooding. For this reason, further research needs to be made of the influential factors and the psychological well-being dimensions of each family.

**Conclusion**

The impact of tidal flooding on the has been carried out psychological well-being of the family. The results showed that families in the category of lack of psychological well-being, there was no real difference in psychological well-being among the three urban villages that became the study sample.
Based on these results, recommendations that can be suggested include: 1) Need to consider the psychological aspects of the community affected by tidal flooding, 2) Need to utilize existing resources in the family to improve psychological well-being, 3) Need assistance to overcome the health and psychological problems of people affected by tidal floods, 4) Need to cooperate with related institutions in dealing with health and psychological problems of victims of tidal floods.

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References


