

CORRELATION BETWEEN HOUSEWIVES PREPAREDNESS IN FACING FLOOD WITH COPING MECHANISM IN TAMPING HAMLET, GRESIK REGENCY, INDONESIA

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ABSTRACT

Background: Indonesia is the largest archipelagic country in the world across the equator, located between two continents, two oceans, and located between three plates of the earth. This condition causes the risk of natural disasters such as floods. Tamping is a hamlet that often experiences flooding in Gresik Regency caused by the overflow of the Lamong tributary. This causes disruption in various sectors, especially the economy in the village, causing stress.

Aim: Researchers want to know whether there is a correlation between community preparedness and coping mechanisms in dealing with floods.

Methods: The research design used was observational analytic with a cross sectional research design. In this study, the sample size was 59 people who were housewives in Tamping hamlet. The research data was taken through a questionnaire.

Results: Based on the results of data analysis using Spearman's test regarding the preparedness of housewives with coping mechanisms, the value of $r=0.502$ and significance value of $p=0.001$.

Conclusion: There is a relationship between the preparedness of housewives in dealing with floods and coping mechanisms in Tamping Hamlet.

Keywords: *Coping Mechanism, Floods, Housewife, Preparedness, Tamping Hamlet*

ABSTRAK

Latar Belakang: Indonesia merupakan negara kepulauan terbesar di dunia yang melintasi garis khatulistiwa, terletak di antara dua benua, dua samudera, dan terletak di antara tiga lempeng bumi. Kondisi ini menimbulkan risiko bencana alam seperti banjir. Tamping merupakan dusun yang sering mengalami banjir di Kabupaten Gresik akibat meluapnya anak sungai Lamong. Hal ini menyebabkan terganggunya berbagai sektor terutama perekonomian di desa sehingga menimbulkan stres.

Tujuan: Peneliti ingin mengetahui apakah terdapat hubungan antara kesiapsiagaan masyarakat dengan mekanisme coping dalam menghadapi banjir.

Metode: Desain penelitian yang digunakan adalah observasional analitik dengan desain penelitian cross sectional. Dalam penelitian ini jumlah sampelnya adalah 59 orang yang merupakan ibu rumah tangga di Dusun Tamping. Data penelitian diambil melalui kuesioner.

Hasil: Berdasarkan hasil analisis data menggunakan uji Spearman mengenai kesiapan ibu rumah tangga dengan mekanisme coping diperoleh nilai $r=0,502$ dan nilai signifikansi $p=0,001$.

Kesimpulan: Terdapat hubungan antara kesiapsiagaan ibu rumah tangga dalam menghadapi banjir dengan mekanisme coping di Tamping Hemlet.

Kata kunci: Mekanisme Penanggulangan Banjir, Rumah Tangga, Kesiapsiagaan

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INTRODUCTION

Indonesia is the largest archipelagic country in the world, which includes 17,508 islands across the equator. Geographically, this allows Indonesia to have a variety of cultures, diverse natural resources and population distribution that places Indonesia as one of the most densely populated countries in the world. On the other hand, this condition also raises the risk of disasters such as floods, earthquakes, volcanic eruptions, and health problems. Flood is an event of overflowing water that inundates the ground surface with a height exceeding the normal limit due to natural phenomena and or human activities that can result in casualties, environmental damage, property losses, even paralyze the economy to the government [1].

Preparedness is a series of activities carried out to anticipate disasters through

organization and through appropriate and efficient steps. Preparedness is an important part of the disaster management process for pro-active disaster risk reduction prevention before a disaster occurs [2], [3], [4].

Tamping Hamlet, which is located in Pucung Village, Balongpanggang District, Gresik Regency is one of hamlet that often experiences flooding due to the overflow of the Lamong River. Economic life is the sector that suffers the most from the flood. This is caused by crop failure and disruption of crop distribution. If this condition is not handled properly it will cause stress to the people who live in that place. A person who experiences stress or psychological tension in dealing with problems requires personal abilities and support from the environment, the method used by individuals to reduce stress is called coping [5], [6], [7], [8], [10]. Based

on the background of the problem, the researcher wants to know whether there is a correlation between society preparedness and coping mechanisms in dealing with floods.

METHODS

The research design used was observational analytic with a cross sectional research design. The research data were 59 housewives in Tamping Hamlet which were collected using a questionnaire. Data analysis was performed using Spearman's Test. Independent variables include family

Table 1: Age of housewives

Age (years)	n
20 – 29	4 (6,8)
30 – 39	12 (20,3%)
40 – 49	29 (49,2%)
50 – 59	8 (13,6%)
60 – 69	6 (10,2%)

preparedness to face floods and coping mechanisms, while confounding variables include knowledge, education, physical health, psychological, cognitive, social skills and behavior.

The population in this study were residents of Tamping Hamlet, Pucung Village, Balongpanggang District, Gresik Regency. The sample in this study were housewives. According to Solvin formula, there were 59 people. The sampling technique is purposive sampling with

inclusion criteria housewives aged 20-65 years. Exclusion criteria were housewives who did not complete informed consent data and questionnaire data.

The data used are primary data in the form of informed consent, education data for housewives, questionnaires for preparedness in dealing with floods and questionnaires on coping mechanisms. Data analysis using computer software IBM SPSS statistics 26 with the stages of editing, coding, entry, cleaning, tabulating as well as univariate and bivariate data analysis [9], [11].

RESULTS

Demographic age of housewives in Tamping Hamlet, Pucung Village, Balongpanggang District. The youngest age is 24 years as many as 2 people while the oldest age is 64 years as many as 1 person. The highest age group was in the 40-49 years age group as many as 29 people.

The highest education category for housewives in Pucung Village is Elementary School with a percentage of 72.9% while the least education is 3-year Diploma with a percentage of 3.4%.

Table 2: Education level of housewives

Education Level	n
Elementary School	43 (72,9%)
Junior High School	7 (11,9%)
Senior High School	7 (11,9%)
3-year Diploma	2 (3,4%)

Preparedness is assessed based on the percentage score of the questionnaire which ranges from 0 – 100%. The scores are then calculated in terms of the 20, 40, 60 and 80 percentiles to determine the classification of the preparedness of the sample.

Table 3: Preparedness classification

Persentil	%	Interpretation
< Percentiles 20	< 60	Very low
Percentiles 20 – 40	60 – 75	Low
Percentiles 40 – 60	76 – 79	Medium
Percentiles 60 – 80	80 – 90	High
> Percentiles 80	> 90	Very high

The level of housewives' coping mechanisms against flooding is highest in the high category. The level of trust (a) in

Table 5: Correlation of preparedness (KSPG) with coping mechanism

		KSPG	Coping
Spearman's rho	KSPG	Correlation Coefficient	1.000
		Sig. (2-tailed)	.502**
		N	59
Coping		Correlation Coefficient	.502**
		Sig. (2-tailed)	1.000
		N	.000
		N	59

DISCUSSION

In this study, the characteristics of housewives based on age were mostly in the age group range of 40-49 years, namely 29 people (42.9%) and the youngest age was in the range of 20-29 years as many as 4 people (6.8%). Based on the characteristics

this study was 0.05; so if $p < 0.05$ then it can be said that there is a relationship.

Table 4: Coping mechanism level

Indicator	n
Very low	7 (11,9%)
Low	11 (18,6%)
Medium	10 (16,9%)
High	20 (33,9%)
Very high	11 (18,6%)

Based on the table on all samples, the Spearman correlation test obtained a correlation coefficient value of $r = 0.502$ and a significance value obtained $p = 0.000$. Therefore, it can be concluded that there is a relationship between Preparedness (KSPG) and Coping in all samples with a strong correlation of $r = 0.502$.

of housewives based on the level of education, it was found that there were 43 Elementary School education levels (72.9%), 7 people from High School (11.9%) and 2 people from 3-year Diploma (3.4%). Pregnant women with healthy reproductive age have a greater percentage

than those at risk of reproductive age, which is 83.4%.

Based on the questionnaire on the preparedness of housewives in dealing with floods, it was found that 64.4% at a level below "High". Meanwhile, based on the questionnaire, the coping mechanism of housewives in dealing with floods was found to be 47.4% at a level below "High".

Based on the Spearman test to determine the relationship between housewives' preparedness in dealing with floods with coping mechanisms, it was found that $p = 0.000 \approx 0.01$ where this result is the same as the theory which states that sufficient knowledge about disaster prevention or management affects the level of community preparedness in dealing with a disaster more so that the community is able to adapt to changes and responses to threatening situations called coping mechanisms [4], [7], [10].

Natural disasters are one of the major problems confronting humanity. These occur when extreme natural phenomena like earthquakes, storms, or floods cause loss of lives, human suffering, or extensive damage to property [12]. The flood is the second-most widespread natural disaster on earth.[13]

In these circumstances, psychological preparedness play an important part that one must possess for survival. Psychological preparedness is a

state of readiness, mentally and emotionally, of a possible impending flood to protect oneself, other people or family. Morrisey and reser (2009) state that psychological preparedness involves processes and capacities such as knowledge, anticipation and decision making of one's thoughts, feelings and action.[14]

Psychological preparedness means that natural reaction to stress are expected to help people feel more control. [15] Nevertheless, it is unrealistic to think that one can be fully prepared emotionally and cognitively for a stressful and confronting situation. But psychological preparedness can play a significant role in coping with the stress of the unfolding situation. [14]

Natural disasters, such as flood, can be potentially stressful. In response to psychological stress, coping occurs to sustain mental wellness and emotional well-being. The coping mechanisms were remedial actions undertaken by people whose survival and livelihood are compromised or threatened.[16] Among the coping mechanisms were the problem-focused coping and emotion-focused coping. Emotion-focused coping involves trying to prevent having an emotional response to the stressor. Emotion-focused coping includes avoidance, minimizing the problem, distance oneself from the outcome of the problem, or doing things such as

eating or drinking. People adopt this to numb the pain.[17]

In addition, Kieffer (2013) also suggested that there is a need to be prepared for the rarest, biggest events; and improving emergency-response system and educating the public will greatly improve preparedness for the next inevitable outburst of Mother Nature.[18]

Since this kind of incident has an impact to the emotional, physical, or financial aspect of their lives, the coping mechanisms come in for it is helpful in handling the stressful conditions and to be able to pull their selves together to go on through life. Therefore, psychological preparedness and coping mechanisms were interdependent with each other. One cannot go without the other because they were mutually dependent. According to the Federal Emergency Management Agency or FEMA, preparing for disaster helps everyone and accept the fact that disasters do happen; and when people feel prepared, they can cope better. With this, the extension of what coping mechanism they use depends on the level of psychological preparedness.[19]

CONCLUSIONS

The researchers concluded that the average age of housewives who became respondents was more than 40 years old, with predominantly low level of education.

The level of preparedness of housewives in dealing with flooding based on the questionnaire was on average at a level below "High", and the coping mechanism of housewives in dealing with floods was 47.4% at a level below "High". There is a relationship between the preparedness of housewives in dealing with floods and coping mechanisms.

ACKNOWLEDGEMENTS

We express our deepest gratitude to the Gresik District Health Office which has provided good cooperation. To the student of the Faculty Medicine, Widya Mandala Surabaya Catholic University for their support in this research.

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