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ANALYSIS OF HAPPINESS OF FISHERMEN TOOLS CAPTURE GILL NET IN ERETAN VILLAGE, KANDANGHAUR SUB-DISTRICT, INDRAMAYU DISTRICT, WEST JAVA

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KeyWords
Happiness Level, Fisherman, Capture Tool, Binary Logistic Regression

ABSTRACT

This research aims to analyze the happiness level of fishermen gillnet fishing equipment and factors affecting the village of Eretan, subdistrict Kandanghaur, district of Indramayu, West Java. The method used in this research is descriptive with a quantitative approach. The collection of data in this research is done by interviewing method, and direct observation in the field by giving a set of written questionnaire to the respondent to be answered, with the number of fishermen 83 people. In this research, it uses the analysis of Binary Logistic, which is used to determine what factors affect the level of fishermen's happiness. The results showed that from 83 fishermen who interviewed and distributed the questionnaire, 56 fishermen came into the category of high happiness level, with the highest score of 4.66, while the remaining 27 fishermen came into the Low happiness level category with the lowest value of 3.34. The factors influencing the level of happiness in this research are influenced by education which is where happiness risk decreases by 1.055 times. As for variables that have significant effect on the level of fishermen happiness in this research are only variable income, while other variables have no significant effect on the level of happiness.

INTRODUCTION

The fishermen community is identical with the poverty caused by economic factors, namely the lack of capital owned by fishermen, technology owned, low market access and low community participation in the processing of natural resources and non Economic or commonly called social factors such as high population growth, low level of education, and low level of health and other reasons such as public facilities and infrastructures of the coastal area [1]. The capture device becomes one of the income factors for fishermen to capture the sea. The dependence of fishermen on fishing technology is very high, because in addition to the condition of the fishery resources are mobile, that is easy to move from one place to another, also to catch fishermen need tools to can last a long life on the water [2].

Eretan Village is one of the villages in Kandanghaur sub-district, Indramayu district. Located in the coastal area makes most of the community livelihoods of Eretan village as fishermen. The types of capture equipment used by fishermen in Eretan Village are Gillnet, Cantrang, and Bubu. However, most of Eretan village fishermen use gillnet capture tools to catch fish. Dependency of the fishermen of Eretan village with gillnet capture is increasingly higher after the government issued regulation of the Minister of KP No. 71/2016 on the banning of Cantrang. Nevertheless, the difficulties of fishermen to get fish also often occur especially during the famine season, not infrequently fishermen do not perform fishing operations during the season of the famine so that fishermen have no income because they do not get fish.

The uncertain season of arrest became the cause of the reduced income for fishermen. Poor climatic conditions require fishermen not to go to the sea. Business or side work is one of the efforts made by fishermen to have an alternative source of income. However, business income or side work is sometimes still not enough to meet the needs. It certainly has an impact on the happiness level of fishing equipment.

Happiness is an individual judgment of the overall quality of life. Happiness is also referred to as subjective well-being [3]. Subjective Well being is the predictor of individual quality of life because Subjective well being affects individual success in various domains of life. Happiness arises from factors affecting a person's emotions. Emotions that affect individual happiness are positive emotions [4]. Positive emotions that affect happiness are divided into three types, namely the emotions of the past, present, and future. These three types of emotions are an internal factor of happiness. In addition there are external factors of happiness namely factors that originate from the environment, among others age, gender, marriage, race, wealth, social life, religion, education. It can be concluded that happiness can be possessed by anyone, no exception to individuals who work as a fisherman [5].

MATERIALS AND METHOD

The research was carried out in Eretan Village, Kandanghaur District, Indramayu Regency, West Java. When the research took place during August-September 2019.

The method used in this research is quantitative descriptive. It is said quantitative descriptive method because this type of research produces data in the form of numbers and which are then analyzed statistically. The data collected in this research is the happiness of gill net fishing gear in Eretan village, Kandanghaur District, Indramayu Regency, West Java.

In this research researchers will take samples with a purposive sampling technique. Purposive sampling technique is the technique of determining the sample carried out with certain considerations aimed at making the data obtained later more representative [6]. The consideration is that gillnet fishermen who use ships under 10 GT.

The data used in this research are primary and secondary data. Primary data obtained when conducting research in the field, namely from the informant / respondent. The data obtained comes from the questionnaire answers distributed directly to respondents. Secondary data were obtained from literature, agencies and other sources related to research. In this research data were obtained from the relevant agencies at the research location.

Table 1. Types of data, data and data sources

Data Type	Data	source
Primary	Internal Subject Conditions:	Questionnaire

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Data Type	Data	source
Secondary	• Age • Education • Revenue • Ship Size • Job status • Side job • Number of Eretan Village Fishermen • Number of Fishermen Based on Gillnet Fishing Equipment • Fisherman location	UPTD Eretan

This research uses a scale with a Likert scale type. The variable to be measured is translated into an indicator variable. The choice of answer scale in this research uses a Likert scale model with 5 answer choices. The scale of the answers are Very Suitable (SS), Suitable (S), Less Suitable (KS), Not Suitable (TS) and Very Not Suitable (STS).

RESULTS AND DISCUSSION

Based on survey results, the types of fishing gear used by fishermen in Eretan Village are gillnet, cantrang, and bubu. However, the majority of Eretan Village fishermen use gillnet fishing gear to catch fish. The dependence of Eretan Village fishermen with gillnet fishing gear is higher after the government issued Ministerial Regulation KP No.71 / 2016 concerning the prohibition of using Cantrang. Small boats under 10 GT usually do daily fishing, which is fishing every day. The size of the ship used determines the catching area.

Fishermen who use ships with a size of 2 GT operate fishing in Indramayu and Cirebon waters. The size of the 4 GT ship operates fishing in the waters of Indramayu, Cirebon and Ciasem. The size of the 6 GT ship operates fishing in waters traversed by the size of 2 and 4 GT ships but the range of ships with the size of 6 GT is wider which also operates into the waters of Jakarta. Then ships with the size of 8 GT have a wider range of fishing operations than the size of the previous ship, which operates into the waters of Indramayu, Cirebon, Ciasem, Jakarta, to Central Java. Fishermen's catches are reported to the fish auction place and then auctioned and sold to traders or further processed for processing.

Demographics of village respondents were analyzed to determine the description of the area. Demographics of respondents are presented in Figure 1, Figure 2, Figure 3, Figure 4, Figure 5, and Figure 6.

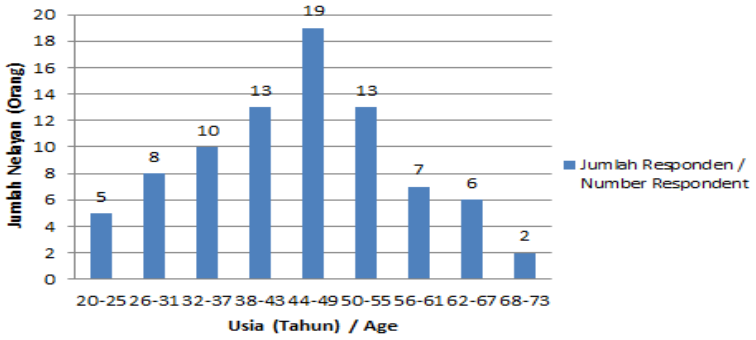


Figure 1. Demographics of Respondents By Age

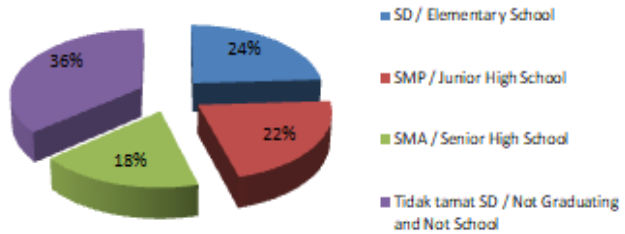
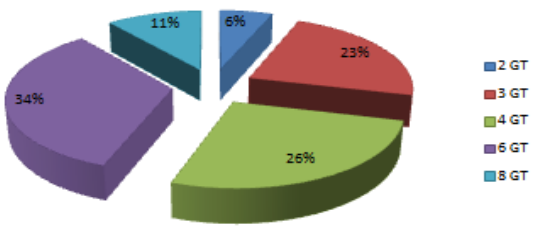


Figure 2. Demographics of Respondents Based on Education



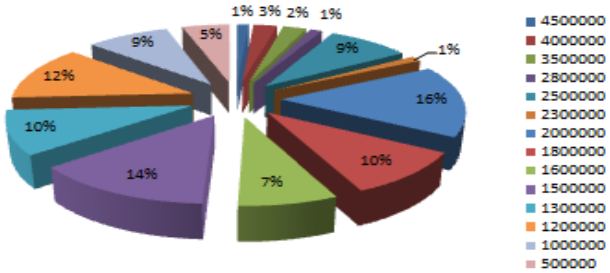


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Figure 3. Demographics of Respondents Based on Ship Size

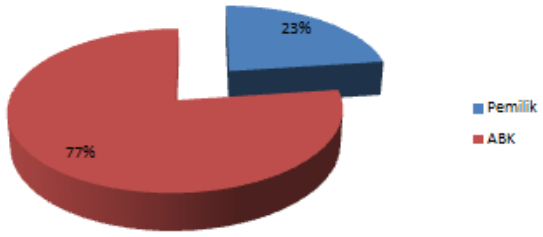

Figure 4. Demographics of Respondents Based on Income

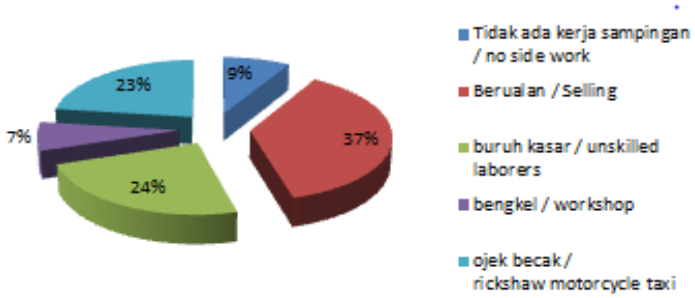

Figure 5. Demographics of Respondents Based on Worker Status

Figure 4. Demographics of Respondents Based on Side Job

RESULTS OF SUBJECTIVE WELFARE EVALUATION

Based on the results of the questionnaire calculation, the overall average value (X) was obtained at 4.0. This value is the benchmark for determining high or low levels of happiness. The category table for determining the level of happiness is presented in table 1.

Table 1. Subjective Well-being Determination Category

Variable	Criteria	Category
Level of happiness of gillnet fishing gear	X ≥ 4.0	High
	X< 4.0	Low

It is known that of the 83 gillnet fishermen respondents with a boat size below 10 GT with a minimum value criteria of 4.0 is with a percentage of 67% namely 56 respondents of fishermen who are categorized as high happiness with the highest calculation value 4.66, while with a percentage of 33% namely 27 fisherman respondents who are in the category of low happiness with the lowest calculation value 3.34.

To find out the relationship of socioeconomic variables in subjective well-being, logistic regression was used. The results of this analysis are presented in Table 2.

Table 2. Logistic Regression Results

		B	S.E.	Wald	Df	Sig.	Exp(B)
Step 1[a]	Usia / *Age*	.003	.044	.005	1	.942	1.003
	Pendidikan/ *Education*	.053	.171	.097	1	.756	1.055
	Pendapatan / *Income*	.000	.000	12.851	1	.000	1.000
	Ukuran Kapal / *Ship Size*	-.288	.243	1.408	1	.235	.750
	Status Nelayan / *fishing status*	-16.350	7876.452	.000	1	.998	.000
	Constant	9.191	7876.453	.000	1	.999	9807.336

a. Variable(s) entered on step 1: Usia / *Age*, Pendidikan / *Education*, Pendapatan / *Income*, Ukuran Kapal / *Ship Size*, Status Nelayan / *fishing status*.

The logistic regression results from the data obtained in testing the hypothesis in this research are omnibus variables, ob-

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tained a value of good2 goodness of fit test of 57.414 with a significance level of 0.000. This value when compared with the significance level of 5%, from the significance value obtained is smaller so it indicates that all independent variables affect the dependent variable.

Then obtained Nagelkerke R2 value of 0.697. Nagelkerke R2 value is used to see the ability of independent variables in explaining the dependent variable. This indicates that it means that the subjective welfare variable of fishing gear fishermen can be explained by the variability of the variables Age, Education, Vessel Size, Income, Experience, and Fisherman Status of 69.7%, while the remaining 30.3% can be explained by other variables.

In this research, the logistical regression prediction accuracy was 88%. Chi-square test was conducted for this research. Chi-square test results showed significant (Sig value> 0.05) so that the predicted probability corresponds to the observed probability.

The age variable with Odd ratio can be known as 1,003, meaning that every 1 year increase in fishermen age, the chance of happy risk will increase by 1.003 times. The higher the age, usually the physical condition and body performance begin to decrease so that health can also be reduced. individuals are said to have high subjective well-being when they are satisfied with their living conditions, often experience positive emotions and rarely feel negative emotions [7].

A person's work productivity can increase with age followed by physical, psychological and intellectual development. However, the higher a person's age, the less the condition and performance of the body in their activities, which means that fishermen's work productivity decreases which then affects the level of income so that the impact on the happiness level of fishermen decreases.

From the logistic regression test results, the Sig Wald value for the age variable is 0.942 higher than the value $\alpha = 0{,}05$. It is assumed that Ho is accepted, which means that the age level does not significantly influence the happiness of gillnet fishing gear in Eretan village.

Odd ratio for education level is 1.055, meaning that every increase in education level the chance of unhappy risk will increase by 1.055 times. education is a very useful investment for economic development. Decision making is also influenced by education [8].

The logistic regression test results obtained Sig Wald value for the educational variable is equal to 0.756 higher than the value $\alpha = 0{,}05$. Which means Ho is accepted, meaning that the level of education does not significantly influence the happiness of gillnet fishing gear in the village of Eretan.

Furthermore, income variables are also analyzed in this research. Odd ratio for education level is 1,000, i.e. every income decrease the chance of unhappy risk will increase by 1 time. Low education and income are factors that cause stress and estrangement in a relationship. [9]

The logistic regression test results obtained Sig Wald value for the income variable is equal to 0,000 lower than the value $\alpha = 0{,}05$. This caused the rejection of Ho, meaning that the income level variable significantly affected the happiness of gillnet fishing gear in the Eretan village. Clark et al. (2008) absolute income contributes to the level of happiness.

Then the ship size variable is analyzed and the Odd ratio for the ship size variable is 0.750 ie every increase in ship size the chance of unhappy risk will increase by 0.750 times. The size of the boat affects the catch of fishermen when they go to sea, but there are other factors that influence the fishing season.

The logistic regression test results obtained Sig Wald value for the ship size variable is 0.235 higher than the value $\alpha = 0{,}05$. This causes Ho to be accepted, meaning that the variable size of the ship does not significantly influence the happiness of gillnet fishing gear fishermen in the Eretan village.

The next variable analyzed is the fisherman worker status variable. Odd ratio for the level of status of fishermen workers is 0,000, ie fishermen who have labor status (ABK) will have a chance of being unhappy risk of 0 times.

The logistic regression test results obtained Sig Wald value for the status of fishing worker status is equal to 0.998 higher than the value $\alpha = 0{,}05$. This causes Ho to be accepted, meaning that the size of the ship does not significantly influence the happiness of gillnet fishing gear fishermen. in the Eretan village.

From the results of the data obtained that almost all variables do not significantly influence the level of happiness, which means that the P value is greater than the alpha value (α) 0.05 except the income variable with a P value of 0,000.

In this research, income variable is the only variable that significantly influences happiness level. The results of this research support the statement of Clark et al. (2008) which states that absolute income contributes to the level of happiness. This is because the income for Eretan village fishermen is a determinant in operating their business related to operational costs for fishing and to support their families in the form of food or non-food. The income of fishermen is often uncertain due to natural conditions which causes high vulnerability of fishermen's lives and requires alternative livelihoods besides fishing. In addition, the increasing needs and inflation occur continuously, resulting in badly needed income and affecting the happiness level of Eretan village fishermen in the current conditions.

CONCLUSION

Based on the research results of the analysis of the happiness of fishermen to fishing gear in the village of Eretan based on fishing gear gill net can be concluded :

1. The results of data obtained from 83 respondents of Eretan village fishermen based on gillnet fishing gear are categorized

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as having a high level of happiness with a percentage of 67% as many as 56 fishermen respondents and categorized fishermen respondents have a low happiness level with a percentage of 33% as many as 27 fisherman respondents.

2. Income variable significantly influences the happiness of fishermen in Eretan village, where if there is a decrease in income, the chance of unhappy risk increases by 1 time. The other variables, namely age, education, ship size, and status of fishermen workers did not significantly influence the happiness of gillnet fishing gear in Eretan village. The results of this research support the statement of Clark et al. (2008) which states that absolute income contributes to the level of happiness.

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