

COPING STRATEGIES AND FAMILY WELL-BEING OF SMALL SCALE FISHER'S HOUSEHOLD

¹ISTIQLALIYAH MUFLIKHATI, ²NETI HERNAWATI

^{1,2}Department of Family and Consumer Sciences, Faculty of Human Ecology Bogor Agricultural University, Indonesia
E-mail: ¹istiqlaliyah@yahoo.com, ²neti.hernawati@gmail.com

Abstract- Fisherman's household has erratic income, depending on the season. That condition requires the families to undertake coping strategies to maintain their well-being. The purpose of this study was to analyze the level of well-being of fisherman's families and the coping strategies undertaken. The survey was conducted of 100 families of fishermen in Bekasi, West Java Province, Indonesia. The study found that only 14 percent of fisherman's families had incomes below the poverty line. Most of fisherman's families undertook as many as 7-13 strategies of coping. Coping strategies that mostly undertaken when the incomes fall were to reduce or replace the side dish, and owe the stall and relatives. Only less than a third of families generated extra income as their coping strategy. Based on the level of subjective well-being, more than half of the households were quite satisfied with their well-being. The result of correlation test revealed that there was no significant difference in the number of coping strategies undertaken between poor and non-poor families. However, there was a significant correlation between the number of coping strategies and subjective well-being. The more the undertaken coping strategies are, the lower the level of subjective well-being of fisherman's families will be.

I. INTRODUCTION

Indonesia as an archipelago country, has a large marine fishery resources. However in Indonesia, capture fisheries is still dominated by small-scale fishermen or traditional fishermen. According to the FAO Glossary, small-scale or artisanal fisheries are traditional fisheries involving fishing households (as opposed to commercial companies), using relatively small amount of capital and energy, relatively small fishing vessels (if any), making short fishing trips, close to shore, mainly for local consumption (Tietze, 2016). Based on that condition, fishermen especially fishermen in small-scale are particularly vulnerable to poverty. According to Bene 2003, fishermen was called as the poorest segment of the poor segments in community. Börner et.al 2014 said that poor rural households are particularly vulnerable to economic shocks because they rely on economic activities, such as agriculture and forestry, for which returns are highly variable and uncertain.

Fishermen family is also vulnerable to various shocks. fishermen activity for finding fish in the sea, faces various risks which possibly hamper their family income. Some of these obstacles were included :border of fishing area, catching technology was inadequate, and socio-economic barriers (Islam et al. 2014). Risks that are often experienced by fishermen, namely: uncertainty of production and environmental fluctuations access to fish resources, price risk from unstable supply conditions and the risk of losses on assets held even risking their lives on sea conditions (Crona et al. 2010). All these risks can lead to economic shocks for family.

Economic shocks which is faced by fishermen family, is able to cause stress on each member of the family because the fulfillment disturbed. In these conditions, family needs to do coping so the situation can be controlled, restrained and resolved. Coping is

defined as an attempt both cognitive and behavioral to manage internal and external demands specifically which considered to be very heavy or exceed their resources. The Definition has three keys, they are :First: process-oriented, focusing on what you think and emphasizes the stability of the change. Second: looked coping as contextual which is affected by the judgment of others on the actual needs and the resources under management. Third: do not assume between good coping and coping bad. Coping theory is identified by using two processes, namely the cognitive assessment and solving problem, as an intermediary of the pressure between someone with their environment and solving problem in long term (Folkman et al. 1986). Corbett (1988) in Hunnes (2013) declared that coping strategies theory describes a household will respond either proactive or reactive of adverse conditions or endanger family either from the economic, social, or climate.

According to Friedman (1998) in Puspitawati's book (2012) There are two types of coping strategies, namely: internal family coping strategy and external family coping strategies. Coping focused on the problem can be gauged by the following assumptions: activating to do coping, having a plan, reducing competition, controlling attitude themselves, seeking social support (Carver et al. 1986). Lazarus (1991) in Puspitawati (2012) revealed that coping strategies focused on the problem, was an attempt to change the circumstances of an individual and his environment. Because, problem-solving strategies was proved effective to resolve problem which related to jobs and finances, health and personal relationships (Headey dan Wearing 1990). According to Puspitawati (1998) in Puspitawati (2012) Coping Strategies for solving problem, can be solved by Generating additional income and Cutting back expenses.

Meanwhile Börner, et.al (2014) coping strategies was divided into four groups, they are: 1)

Asset Depletion includes reports of spending savings or selling or renting out land or other assets, 2) Reallocated Labour represents the initiation of new on - or off farm activities, or changes in activities, including the collection of more wild products, 3) Sought Outside help includes seeking assistance from friends, family members or organisations, as well as borrowing, and finally, 4) Reduced Consumption includes reported reductions in spending or in the number of meals prepared and consumed.

Coping strategies are expected to families affected by the shock can return to equilibrium or normal condition, so the welfare of a family destination (family well-being) can be reached. Hird 2003 in Miligan et.al 2006 said that family well-being was consist of some components. these components were physical wellbeing, material wellbeing, social wellbeing, development and activity, and health. Hird incorporated these as part of objective wellbeing, although she substituted health with emotional wellbeing. Sementara itu menurut Fahey et.al 2012, family well-being of parents is measured mainly by reference to physical and mental health, along with health risk-factors as represented by smoking. Some approaches to well-being include resources such as income, good housing or access to services as dimensions of well-being.

Based on the explanation above, the objectives of this study were: 1) to analyze the economic coping strategies and the welfare of fishermen families, 2) analyze the relationship between family characteristics, coping strategies, and the level of family welfare in fishermen households.

II. METHOD

This research is a survey study was involving 100 fishermen's households in Pantai Mekar village, Muara Gembong, Bekasi District, West Java Province. Types of data were collected including primary data, was obtained through interviews with fishermen's wives using a questionnaire. Data which was collected in the form of socio-economic characteristics, economic coping strategies, and family welfare.

Family socio-economic characteristics Consisted of The age of husband and wife, the education of husband and wife, family size, wives employment, and family income. Age, education, family size and family income were in the form of ratio data, while wives employment are distinguished on working and not working.

Economic coping strategies was obtained using a questionnaire which was modified by Simanjuntak (2010). Coping strategies consisted of 20 items of questions with the answer "no" was given a score of 0, and a "yes" was given a score of 1, so the acquisition of the total score of a minimum was 0 and a maximum was 20. In the subsequent data analysis, coping strategies was measured by frequency of activities family to do coping. Family which was in a

low category of coping strategies if they had less than 7 activities, 7-13 activities as moderate, and high if they had more than 13 activities.

Family welfare in this study was measured using objective and subjective measurement. The welfare of the family objectively measured from the amount of income per capita compared with standard poverty of BPS. The capita income was obtained by dividing family income based on family size. The family was said as poor family if the capita income was below border of poverty and was not considered as poor family if the capita income was above the border of poverty.

Subjective well-being was measured by using a modified instrument of subjective well-being Puspitawati 2012. wives expressed satisfaction about the condition of their family life. Instruments subjective well-being consisted of 20 items statement. Each statement was given 5 alternative answers, namely: "Very dissatisfied" with a score of 1 was "not satisfied" = 2, "less satisfied" = 3, "satisfied" = 4, and "very satisfied" = 5. Thus obtained the maximum score of 100 and minimum score of 20. Next would served as an index. The family was said to be high subjective well-being if they had subjective well-being index > 80; said to be moderate if the index was around 60-80, and is said to be low if index < 60.

Data had collected then analyzed by descriptive statistics and Pearson correlation test. Descriptive analysis was used to describe the characteristics of the family, coping strategies and family well-being. While Pearson correlation test was used to analyze the relationship between the characteristics of families with coping strategies and family well-being.

III. RESULTS AND DISCUSSION

Characteristics of Family

Table 1 showed the statistical deskriptif of family social economic characteristic on fishermen family. The average age of husband in fishermen family is 42.50 years and 36.42 years for the average age of wife which is classified as the productive age. Education fishermen families, especially husband's education and wife's education is still relatively low. The average of both took about 5 years of formal education or had not completed primary school. Even there were any people never took formal education as much as 12% for husband and 10% for wife. Poor education cause decreasing of opportunities for worthy employment and incomes, also less confidence to look for another job. Poor education of fishermen families were also applicable in other parts of Indonesia such as the results of research that has been done by Suryani et al. (2004); Saleha et al. (2002); Hasanuddin et al. (2013); and Sudarmo et.al (2015). Based on family size, it showed the average family have members as much as 5 people each family or classified as moderate family. However, there are still

some families that have family members more than 8 people or classified as large family. The number of family members on the one hand could be beneficial for family, which can generate revenue. But in the other hand many family members would be a burden, especially in meeting the needs of all family members.

Family needs can be met if the family has enough income. Family income is derived from fished of head family as a fisherman plus the income of his wife and other family members. The average of fishermen family's income is IDR 3,204,300.00 per month. Minimum income of IDR 525,000.00 and a maximum of IDR 10.9 million per month. Although most of the fishermen's wife did not work, but his wife's involvement in helping the husband's business as fishermen and manage their resources for the family's needs are met quite large. This is in line with research Davis (2000) and Valdivia (2001) in Mattison (2009), Wife had a major role in sustaining life, even when there was a high drop rate of the available resources.

Devided result between family income to family size was obtained income percapita of fishermen family in ranged from IDR 116 666 / month to IDR 2,173,333 / month. The average income per family amount to IDR 698 953 / month. The average value per capita income is well above the poverty border. Nevertheless, there are still 14% of families have per capita incomes in below the poverty borfer or called as poor family. This shows that the majority of small-scale fishermen families is not poor if measured by indicators BPS poverty border. This is in line with research Johan et al. (2013); Muflikhati et.al. (2010).

Table1 Characteristics of the family

Variable	Min	Max	Mean \pm Std
Wife's age (year)	19	67	36,42 \pm 10,46
Husband's age (year)	20	75	42,50 \pm 11,65
Wife's education (year)	0	12	5,15 \pm 2,96
Husband's education (year)	0	12	4,93 \pm 3,08
Family size (person)	2	14	4,75 \pm 1,76
Family income (IDR000/month)	525.00	10,866.6	3,204.30 \pm 2,296.41
Income per capita (IDR000/month)	116.67	2,173.33	698.95 \pm 479,35

Coping strategies

Fishermen family income is very dependent to the fished of head family as a fisherman. Meanwhile the fished at sea is uncertain, depending on the season. At the time of the season the West, where the wind and waves big enough, small-scale fishermen will be difficult to go to sea. so it cause the decline the fished that led to the decline of fishermen family income. According to Fauzi (2010) a sustainable of decreasing

on fished would cause poverty and decrease in well-being. These conditions forced family to make efforts so the needs of all its members are met. the efforts which are known as coping strategies will certainly be adjusted to their available resources.

Based on the amount of family activity which did coping, can be seen that the majority of fishermen family did coping strategies in the moderate category. A total of 80 families from sample did coping strategies which were categorized by 7 to 13 types of activities coping. Fishermen Family did coping strategies which were categorized low amounted 11 families and higher category amounted 9 families.

Table 2 shows the percentage of families to do coping. There are five coping activities most often committed by a family of fishermen, they are: first, 95 percent of families did coping for reducing or replacing the side dishes were eaten. The limited income made families tried to minimize the expenditure of food purchased. Second, 88 percent of households owed to a shop or store to make ends meet. owed strategy to shop is an easy way to do because goods which family needs are able to get directly. Third, amounted 75 percent of families owed to family or relatives. Family who are more understand the condition of the family it self is the closest person either from family or neighbors. Fourth, amounting to 67 percent of families ever owed to skipper fish (pelelek) mainly for getting venture capital to sea. Fifth, by 64 percent of households tried to reduce the amount of rice which iwas eaten or reducing the quantity of cooked rice. Nearly two per three of families of fishermen (64%) did it as an effort to save rice consumed because the unstable income. This is done as a form of minimizing the expenditure of food .

In general there is no real difference between coping committed by poor and non-poor families. However, there is coping only by the non-poor families, such owed to the Bank. There are also many more activities carried out by the non-poor families, such taking the savings. Both coping activities are not carried out by poor families, due to owe to the Bank generally must be guaranteed, while the poor families usually do not have it. Similarly, by taking savings. Most poor families have no savings, due to the income generated is sufficient to meet the basic needs

Table 2 The percentage of families based on coping strategies

No	Coping strategies	Poor	Non poor	Total
1.	Indebted to the family / relatives	64,29	76,74	75,00
2.	Indebted to the neighbour	42,86	36,05	37,00
3.	Indebted to the skipper	78,57	63,95	67,00
4.	Indebted to Bank	0,00	23,26	20,00
5.	Owe to stall / shops	85,71	87,21	88,00
6.	Owed to the cooperative/ public financial institutions	0,00	2,33	2,00

7. Taking savings	21,43	50,00	47,00
8. Pawning	7,14	15,12	15,00
9. Selling assets	57,14	55,81	57,00
10. Husband looking for extra work	0,00	34,88	30,00
11. Wife looking for work	21,43	40,70	38,00
12. Asked for help from relatives or neighbors	28,57	31,40	32,00
13. Reducing the frequency of eating	71,43	44,19	49,00
14. Reducing the amount of rice that is eaten	85,71	59,30	64,00
15. Replacing the staple food	21,43	6,98	9,00
16. Changing the cheaper side dish	100,00	93,02	95,00
17. Reduce child pocket money	57,14	62,79	62,00
18. Reduce smoking	71,43	61,63	63,00
19. Reducing the use of mobile phone	50,00	62,79	62,00
20. Anak terpaksa bolos sekolah	35,71	31,40	33,00

Subjective Well-being

More than half (57%) of family fishermen is categorized subjective well-being in moderate category and almost half of families (42%) in lower category. This shows that there are still many families of fishermen who have not satisfied with the conditions of their life. Satisfaction index of subjective well-being is in the range between 31.20 to 81.20, and the average of 60.81, which means that are in the moderate category (Table 3).

Things that are considered by fishermen's wives which are not satisfactory: the family's financial situation, the availability of family food, house hygiene and sanitation, assets which are belonged by family, education of each member in family, and husband allowance. While, things are considered by fishermen's wives which are satisfied such marriage and relationship or interaction with their husband.

Table 3 Percentage of families according to the category of subjective wellbeing

Subjective well being Category	Poor	Non Poor	Total
Low (<60)	35,71	43,02	42,00
Medium (60-80)	64,29	55,81	57,00
High (>80)	0,00	1,16	1,00
Total	100,00	100,00	100,00

The relationship between family characteristics, Coping Strategies and Subjective Family Welfare

Correlation test results showed there is none of the characteristic variables significantly related to families coping strategies which was done by fishermen family. While the variable subjective well-being has a significant relationship with the age of husband and wife and coping strategies also.

Table 4 Correlation between family characteristics, coping strategies and subjective well

Variable	Coping strategies	Subjective well being
Wife's age (year)	-0,055	0,211*
Husband's age (year)	-0,083	0,227*
Wife's education (year)	0,073	-0,153
Husband's education (year)	-0,040	-0,083
Family size (person)	0,063	0,004
Family income (IDR000/month)	-0,023	0,087
Income per capita (IDR000/month)	-0,073	0,123
Coping strategies (index)	1,000	-0,388**

*: significant $p < 0,05$ **: significant $p < 0,01$

The age of Husband and wife significantly positively correlated with subjective well-being. It showed that wife who has an older age will be more satisfied to what they already have than younger age. In the development stage of family life, the breadth of one's thoughts and experiences will increase and making it easier for individuals to face similar challenges. This result in line with the researches of Johan et al. (2013); and Jivraj et al. (2012).

Results of the study showed, there is no significant relationship between family income to subjective well-being. This is in line with the results of the study Ning (2013). Even in some studies suggest that income is negatively correlated with subjective well-being. It is associated with dramatically higher demands on families which have high income. Otherwise families which have low-income feel "nrimo" or dissatisfied with the condition that they faced.

Results of correlation analysis showed that coping strategies significant negative correlated with subjective well-being. It means if the effort to do the coping strategies is getting lower so that subjective well-being will be increasing. Individuals will feel satisfied and comfortable in the stable conditions. In this condition, family needs can be met and certainly it does not require coping strategies. This study is in line with research Rachmawati (2010); Syafruddin (2012); and Simanjuntak (2010). Wife's Subjective welfare will decrease when they have to do savings or to find another job. Moreover, coupled with the higher amount of owed.

CONCLUSION

Coping strategies which are done by the majority of small-scale fishermen household are: reducing family expenses by reducing or replacing the side dishes which is more cheaper and reducing the amount or quantity of cooked rice and owed (to the shop or store, family or relatives, or to the skipper). Only a small part of the efforts to increase revenue (generating income). The average family of

fishermen do as much as 7-13 activities coping strategies in moderate category.

Based on BPS poverty border, Most families of fishermen is categorized in non-poor category. Subjective well-being of fishermen families in moderate category. Dimension which makes the most prosperous wife is a relationship or interaction with her husband, children, family and neighbors were very good. There is a significant positive relationship between wife's age to subjective well-being. While many coping strategies significantly negatively correlated to subjective well-being. Fishermen family welfare could be improved by reducing the customs owed. This can be overcome by good financial management, considering the revenue earned during the season a lot of fish is quite high.

REFERENCES

- [1] U. Tietze. Technical and socio-economic characteristics of small-scale coastal fishing communities, and opportunities for poverty alleviation and empowerment. FAO Fisheries and Aquaculture Circular No.1111, 2016. <http://www.fao.org/3/a-i5651e.pdf>.
- [2] C. Béné. When Fishery Rhymes with Poverty: A First Step Beyond the Old Paradigm on Poverty in Small-scale Fisheries. *World Development*, vol. 31, pp. 949-975, 2003.
- [3] J. Börner J, G. Shively, S. Wunder, and M. Wyman. How Do Rural Households Cope with Economic Shocks? Insights from Global Data using Hierarchical Analysis. *Journal of Agricultural Economics*, Vol. 66, No. 2, 2015, 392–414 doi: 10.1111/1477-9552.12097.
- [4] M.M. Islam, S. Sallu, K. Hubacek, and J. Paavola. Limits and barriers to adaptation to climate variability and change in Banglades coastal fishing communities. *Marine Policy*. 43:208-216, 2014.
- [5] B. Crona, M. Nystrom, C. Folke, and N. Jiddawi. Middlemen, a critical social-ecological link in coastal communities of Kenya and Zanzibar. *Marine Policy* 34:761-771.2010.
- [6] S. Folkman, R.S. Lazarus, C.D. Schetter, A. DeLongis, and R.J. Gruen. Dynamic of a stressful encounter: cognitive appraisal, coping, and encounter outcomes. *Journal of Personality and Social Psychology*. 50(5):992-1003.1986.
- [7] H. Puspitawati. *Gender and Family*. Bogor (ID): IPB Press Bogor, 2012.
- [8] D.E. Hunnes. Nutrition and food security in a changing climate: methods for predicting household coping strategy use and food security in the ethiopian context [disertasi]. Los Angeles (US): University Of California.2013.
- [9] Carver, S. Charles, Scheier, F. Michael, Weintraub, and K. Jagdish. Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*. 56(2): 267-283, 1986. <http://dx.doi.org/10.1037/0022-3514.56.2.267>.
- [10] B. Headey and A. Wearing. Subjective well-being and coping with adversity. *Social Indicators Research*. 22(4):327-349, 1990.
- [11] M. Simanjuntak. *The Determining Factors Influenced to Family Well-Being and Academic Achievement of Children from Hopeful Family Programme (PKH) Beneficiaries*[thesis]. Bogor (ID): Bogor Agricultural University, 2010.
- [12] N. Suryani, S. Amanah, and Y.I. Kusumastuti. Analysis of formal education of children on fishermen family at Karangjaladri Village, Parigi Subdsistrict, Ciamis District, West Java Province. *Fisheries Economics Bulletin*. 5(2):33-43, 2014
- [13] Q. Saleha, Hartoyo, and D. Hastuti. Family Resources Management:gender analysis of fishermen family life in Bontang Kalimantan Timur. *Journal of Family and Consumer Science*. 1-13.2002.
- [14] N.L. Hasanuddin, N. Noor, H.R. Santosa. Is it possible to eradicate poverty in the fishermen village?. *International Journal Of Environmental Sciences*. 4(2):123-130, 2013.doi: 10.6088/ijes.2013040200001.
- [15] A.P. Sudarmo, S. Mulyono, Baskoro, B. Wiryawan, E.S. Wiyono, and D.R. Monintja. Social Economics Characteristics Of Coastal Small-Scale Fisheries In Tegal City, Indonesia. *International Journal of Scientific & Technology Research* Volume 4, Issue 01, January 2015.
- [16] L. Mattison L. Participatory equality in the governing of marine resources: a gender focused study on fisheries management in Kerala, India and Southern New England, USA [tesis]. Island (IS): University of Vermont, 2009.
- [17] I.R. Johan, I. Muflikhati, and D.S. Mukhti. Life style, financial management, coping strategies, and family wellbeing of fishermen families. *Journal of Family and Consumer Science*. 6(1):30-38, 2013.
- [18] I. Muflikhati, Hartoyo, U. Sumarwan, A. Fahrudin, and H. Puspitawati. Social economic condition and family well being: case on coastal area in West Java Province. *Journal of Family and Consumer Science*3(1):1-10.2010.
- [19] S. Jivraj, J. Nazroo, B. Vanhoutte, and T. Chandola. Age, ageing and subjective wellbeing in later life. *English (GB): University of Manchester*. 2012.
- [20] D.A. Ningsih. Subjective well being ditinjau dari faktor demografi (status pernikahan, jenis kelamin, pendapatan). *Jurnal Online Psikologi*. 1(02):581-603, 2013.

★★★