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EXPLORING FINANCIAL LITERACY AMONG THE FISHERFOLK AND THEIR WIVES IN LAGUNA DE BAY, PHILIPPINES

Rebecca M. Baskial
Associate Professor III
University of Rizal System
Morong, Rizal, Philippines
Email: rebeccabaskial09@gmail.com

Abstract

This study assessed the financial literacy of fisherfolk and their wives in the Laguna de Bay area in the Philippines, specifically examining their demographic characteristics, financial literacy, and financial well-being. A descriptive research design was employed using a questionnaire as the primary data-gathering instrument. The research was conducted in fishing communities in the municipalities of Angono, Baras, Binangonan, Cardona, Morong, Jalajala, Pililla, Tanay, and Taytay in the province of Rizal. Respondents were three hundred thirty (330) randomly selected pairs of fisherfolk and their wives from the nine (9) towns. Results revealed that most fisherfolk and their wives were aged 51–60, had attained a high school level of education or were high school graduates, and had 3–4 children. They reported a moderate monthly income and relied primarily on fishing and fish vending for their livelihood. Only a small proportion had savings, while many accessed multiple credit products. Overall, the fisherfolk and their wives demonstrated low financial literacy, with limited financial knowledge and poor financial behavior, attitudes, and well-being. Educational attainment and years of fishing experience showed a moderate association with financial knowledge, whereas age showed a significant, moderate association with financial behavior and attitude. However, no association was found between age and the number of children with regard to financial knowledge. Similarly, educational level, number of children, and years in fishing showed no association with financial behavior and attitude.

Keywords: *Financial literacy; fisherfolks; financial well-being*

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Introduction

Laguna de Bay, also known as Laguna Lake, is the largest lake in the Philippines. It is located southeast of Metro Manila, between the provinces of Laguna to the south and Rizal to the north. A freshwater lake, it has a surface area of 911–949 km² (352–366 sq mi), an average depth of about 2.8 meters (9 ft 2 in), and an elevation of about one meter above sea level. The lake is one of the primary sources of freshwater fish in the country (Vargas-Nguyen, 2015). Fishing has long been an important source of livelihood for Filipinos, with fish being the country's second staple food after rice. As a country made up of 7,641 islands (as of 2016), fishing is a major source of livelihood for Filipinos living in coastal and lakeside villages, feeding and sustaining millions for centuries (Scotty's Action Sports Network, n.d.).

Laguna de Bay is a major fisheries resource in the Philippines, accounting for 17% of national fisheries production, 10% of national aquaculture production, and 44% of national municipal fisheries production. The lake's existing uses include fisheries, flood control, industrial cooling, irrigation, power generation, recreation, and potable water supply. The Laguna Lake Development Authority (LLDA) estimates that approximately 13,000 fishermen depend directly on the lake for their livelihood, producing about 80,000–90,000 metric tons of fish annually.

The Philippine Statistics Authority (PSA) reported that fisherfolk continued to be among the poorest sectors, recording the highest poverty incidence among the basic sectors in 2021 at 30.6% — a significant increase of 4.4 percentage points, the largest among all basic sectors. Fisherfolk had the highest proportion of individuals in families with incomes below the official poverty thresholds among the basic sectors (Philippine Statistics Authority, 2023). This chronic poverty in the fishing sector has been validated by the fishing-sector group Pambansang Lakas ng Kilusang Mamamalakaya ng Pilipinas (Pamalakaya).

According to Marquez (2023), it is taboo to talk about money in Filipino culture; career success is often attributed to high salary, savings, and tangible investments, and there is reluctance to be perceived as a failure or to be taken advantage of when discussing finances. In a Standard & Poor's (S&P) Global Ratings study, the Philippines ranked in the bottom 30 among 144 countries surveyed, with a financial literacy score of only 25 percent. On basic financial literacy questions, only 2 in 10 Filipinos achieved a perfect score, while 7 in 10 answered at least half correctly. Only 42 percent of adults correctly identified inflation's effect on purchasing power, and only 30 percent understood simple and compound interest. On banking and saving, less than half (46 percent) of adults had a working budget. Regarding borrowing, almost half (45 percent) of Filipino adults had an outstanding loan, with borrowing from family, friends, and microfinance NGOs as the main coping mechanism for financial needs, followed by the use of savings and income as the top two sources in 2021. On investment, only 1 percent of investors owned stocks, bonds, Unit Investment Trust Funds (UITFs), mutual funds, or other managed investment schemes. On insurance, the average amount spent by every Filipino on insurance (insurance density) was PHP2,528 as of the third quarter of 2021, up from PHP1,768 in 2017 (Marquez, 2023).

Literacy, per se, is the capacity to communicate effectively or use language and its symbols to make sense of, and even perform, certain tasks. Financial literacy is the ability to understand financial concepts, skills, and products, and to use them effectively to navigate the economic aspects of life and achieve both short-term and long-term financial goals. It encompasses personal financial management, budgeting, and investing; financial literacy is the foundation of one's relationship with money and is a lifelong learning process — the earlier one starts, the better positioned one is, since financial education is key to long-term financial success. Given the importance of finance in modern society, a lack of financial literacy can be very damaging to an individual's long-term financial well-being.

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Related Literature

Several studies provide context for the financial and livelihood conditions of Filipino fishing households.

Fishing-dependent household income. A study of fishing communities in Lake Sebu, South Cotabato, found that fishing-dependent households earned an average annual income of PHP132,800 — 15% lower than the average for all household respondents — and that 63% of fishing-dependent households lived below the poverty line (Palanca-Tan & Bongat-Bayog, 2021). This figure is presented here as a comparative reference point on income levels among fishing-dependent households in another part of the country; it is *not* a Laguna de Bay statistic.

Supplementary livelihoods. Quiñones et al. (2020) studied the socio-economic condition of fisherfolk in Iligan Bay, Northern Mindanao, using focus group discussions and interviews. They found that because traditional fishing often could not provide higher revenues, fishers and their wives — and even their children — had to engage in additional livelihood activities to supplement daily earnings, such as operating a sari-sari store, livestock rearing, and farming.

Government financial-education initiatives. Miraflor (2021) reported that the Philippine government partnered with BDO Unibank, Inc., and the U.S. Agency for International Development (USAID) to launch a nationwide financial education campaign among fishermen. The Department of Agriculture (DA), through the Bureau of Fisheries and Aquatic Resources (BFAR), the Bangko Sentral ng Pilipinas (BSP), BDO Foundation, and USAID, through its Fish Right Program, jointly launched this financial-education partnership for fishers nationwide. It is in this context that the financial literacy of fisherfolk and their wives warrants study to inform the design of appropriate interventions.

Economic vulnerability around Laguna Lake. Palanca-Tan (2020) examined the economic vulnerabilities of fishing-dependent households around Laguna Lake and found that roughly half of household income and total expenditure in these communities go to food consumption, with household income and consumption being highly inelastic and predominantly determined by household size. All consumption expenditures were found to be income-inelastic — i.e., basic necessities — except for mobile phone load, the only luxury expenditure identified for these low-income fishing households. Derived income (the sum of all expenditures and savings) was not significantly determined by any form of capital but was significantly higher for households engaged in aquaculture. Government conditional cash transfers were found to contribute significantly to household consumption as an income-augmentation measure. These findings underscore the need to consider how fishing households manage limited income when designing programs to augment income and improve financial management.

The researcher, a mathematics faculty member of the College of Education, University of Rizal System – Morong campus, believes the academe can build community partnerships to help fisherfolk achieve financial success. This study examined how fisherfolk and their families manage their limited income and finances. Specifically, it was guided by the following objectives: (1) determine common demographic characteristics related to fishing among fisherfolks and their wives in Laguna de Bay; (2) determine the financial literacy (financial knowledge, financial behavior, financial attitude) and financial well-being of fisherfolks and their wives in Laguna de Bay; and (3) analyze whether the financial literacy of fisherfolks and their wives is related to their demographic characteristics.

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Methods

Research Design and Respondents

The study used a descriptive research design, employing survey data to gather the needed information from fisherfolk and their wives. Questionnaires in English, with Filipino translation, were administered to fisherfolk and their wives in Laguna de Bay, specifically in Rizal Province, in the municipalities of Angono, Baras, Binangonan, Cardona, Morong, Jalajala, Pililla, Tanay, and Taytay. The LLDA estimates that approximately 22,000 small-scale fisherfolk fish along Laguna de Bay. Using G*Power 3.1.9.4, with a power of .95, a medium effect size of 0.20, and $\alpha = 0.05$, the researcher obtained a sample of 330 pairs of male fisherfolk and their wives.

Instrument

The instrument was a partial adaptation of the questionnaire from the OECD/INFE 2023 International Survey of Adult Financial Literacy, used to align the study's results with international standards and to gather baseline financial-literacy data for fisherfolk and their wives. Only items aligned with the condition of the respondents were included. A Filipino translation was prepared by a Master Teacher in Filipino to ensure respondents' full understanding of the questionnaire content. The instrument comprised seven (7) financial knowledge questions, nine (9) financial behavior questions, and two (2) financial attitude questions to determine overall financial literacy, plus twelve (12) questions to assess financial well-being. Although adapted from an established instrument, the questionnaire was pilot-tested with 30 fisherfolk and their wives to establish validity and reliability; Cronbach's alpha was .70, indicating reliability.

Data Analysis

Common demographic characteristics related to fishing — age, educational level, number of children, and perceived monthly average income, as well as income dependence on fishing, number of years as fishers, type of fishery activities, frequency of fishing, and capital sources — were identified, along with the financial products used by respondents. The overall level of financial literacy was determined by summing the scores of the three financial literacy components (financial knowledge, behavior, and attitude), scored following the OECD/INFE 2023 international survey. Financial literacy level was then classified into three categories, following

Chen and Volpe (1998), as cited in Margaretha and Pambudhi (2015): (1) below 60% indicates a low financial literacy level; (2) 60%–79% indicates a moderate financial literacy level; and (3) 80% and above indicates a high financial literacy level.

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Results

Demographic Characteristics Related to Fishing

A greater number of fisherfolk and their wives were in the older age range of 51–60 years, followed by the 41–50 age group. Most respondents had reached the high school level of schooling or were high school graduates. There were fewer young and college-educated fisherfolk and wives; respondents typically had 3-4 children and had been engaged in fishing for 11–20 years. Both fisherfolk and their wives perceived themselves as earning a moderate income and relying solely on fishing. Daily fish capture was the usual activity in the fishery. The fisherfolk were primarily engaged in fishing, with less involvement in fish vending, while the wives helped with fishing and also engaged in fish vending. Both obtained their capital sources primarily from relatives.

Most respondents relied on their mobile phones for paying for products. The primary mode of savings was a savings account; however, only a small number of respondents actually owned one. Respondents obtained credit mostly from microfinance loans and used multiple credit products — likely reflecting the medium income level earned through fishing.

Financial Literacy and Financial Well-Being

Both the fisherfolk and their wives exhibited a low level of financial knowledge. Only the concept of the time value of money was answered correctly; respondents were unable to compute both simple and compound interest on a loan.

Fisherfolk and their wives also exhibited low levels of financial behavior. A greater number of wives sought advice from both dependent and independent sources, closely monitored personal financial goals, and set the family's long-term financial goals.

A low level of financial attitude was likewise observed, as respondents were generally unable to hold on to money over the long term.

The majority of fisherfolk and their wives also reported a low level of financial well-being. More than half of respondents indicated they would be unable to cover a sudden major expense without borrowing money or seeking help from family and friends. Their income could not cover living expenses without borrowing if they were unable to fish. Wives reported that no money was left at the end of each month, and the family's living expenses could not be covered by income from fishing alone.

Relationship of Financial Literacy to Demographic Characteristics

A significant, moderate association was found between respondents' financial knowledge and their educational level, while age showed a significant, moderate association with financial behavior and attitude. No association was found between age and the number of children with regard to financial knowledge. Likewise, educational level, number of children, and years in fishing showed no association with financial behavior and attitude.

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Discussion

The demographic profile of respondents — predominantly older, with limited formal education and multiple dependents — mirrors the broader poverty and vulnerability documented among Philippine fisherfolk, who recorded the highest poverty incidence (30.6%) among all basic sectors in 2021 (Philippine Statistics Authority, 2023). This aligns with prior findings that fishing-dependent households commonly diversify into supplementary livelihoods such as fish vending, small sari-sari stores, and other informal activities to cope with the low and inconsistent income that fishing provides (Quiñones et al., 2020), a pattern also evident among this study's respondents.

The low levels of financial knowledge, behavior, attitude, and well-being observed here are consistent with the broader national picture: the Philippines ranks in the bottom 30 of 144 countries in financial literacy, with fewer than half of adults able to correctly answer basic questions on inflation and interest (Marquez, 2023). The finding that respondents could not compute simple or compound interest, despite relying heavily on multiple credit products obtained largely through microfinance loans, is particularly concerning, as it suggests a mismatch between financial product use and the financial knowledge needed to manage it safely. This mirrors the inelastic, subsistence-oriented spending patterns — nearly all expenditure going to basic necessities, with mobile phone load as the only notable non-essential expense — documented among fishing households around Laguna Lake by Palanca-Tan (2020), and is broadly consistent with income patterns reported for fishing-dependent households elsewhere in the country, such as in Lake Sebu, South Cotabato (Palanca-Tan & Bongat-Bayog, 2021), where a majority of fishing-dependent households likewise fell below the poverty line.

The moderate association between educational attainment and financial knowledge, and between age and financial behavior/attitude, suggests that interventions may be more effective when tailored by education level and life stage rather than applied uniformly. The absence of association between financial literacy and number of children, or years in fishing, indicates that household size and fishing tenure are not, by themselves, reliable predictors of financial capability in this population — reinforcing that low financial literacy here is best understood as a structural and educational gap rather than a function of household composition or fishing experience.

These results reinforce the relevance of existing government-academe-private sector partnerships aimed at fishers' financial education, such as the joint initiative of the Department of Agriculture (through BFAR), the Bangko Sentral ng Pilipinas, BDO Foundation, and USAID's Fish Right Program (Miraflor, 2021). The findings suggest that such interventions would benefit from explicitly addressing interest computation, budgeting, and long-term savings behavior — the specific areas where this study's respondents showed the greatest gaps — rather than general financial-awareness messaging alone.

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Conclusion

Based on the results of this study on financial literacy, the researcher concludes that fisherfolk and their wives need intervention programs to improve their financial literacy and financial well-being, thereby alleviating their economic conditions. In this context, partnerships among the academe — such as the University of Rizal System, Morong campus — local government units, and government organizations concerned with the welfare of fisherfolk should work together to assist the fishing sector.

Limitations and Future Research

This study is limited to a quantitative research methodology and is intended to serve as the basis for future qualitative research in line with the freshwater research agenda of the University of Rizal System. A qualitative study may be conducted to explore the lived experiences of fisherfolk in generating income, as well as the experiences of their wives in managing the family's limited income.

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