

A Cross-sectional Survey on Financial Literacy and Financial Well-being of Healthcare Workers in a Tertiary Hospital in Cebu

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Abstract

Background. Globally, previous surveys on financial literacy among healthcare workers highlight the lack of understanding of basic financial concepts. Financial literacy and financial well-being of healthcare professionals are areas that lack comprehensive study. Assessing the level of financial literacy is vital to raise awareness, identify challenges, and provide tailored support, ultimately improving financial well-being and the quality of patient care.

Objectives. We determined the degree of financial literacy and financial well-being of healthcare workers in a tertiary hospital in Cebu

Methods. One hundred thirty-nine respondents were analyzed in this cross-sectional study using the validated Organization for Economic Cooperation and Development International Network on Financial Education (OECD/INFE) Toolkit. Independent *t* test and ANOVA were used to determine the statistical significance.

Results. The mean Financial Literacy score was 13.7 ± 2.4 over a total score of 21 points. It varied significantly with physicians gaining higher scores relative to other professions. Financial attitude varied significantly with married participants having slightly higher score. The mean Financial Well-being score was 8.3 ± 3.2 over 20 points. It likewise varied significantly with again physicians having higher well-being scores. Similarly, well-being was higher amongst participants with higher income.

Conclusion. Financial literacy of healthcare professionals was quite low. While most healthcare workers demonstrated positive financial behaviors, such as budget management and savings, a significant portion fell short of the minimum target score for financial knowledge and financial attitude. Many struggle with basic concepts in finance, especially compound interest and diversification. Their attitudes around living for today and toward saving were more literate than their attitudes towards spending. Results also showed that on average, the healthcare workers found their financial situation to add stress and worry.

Keywords: financial knowledge, financial attitude, financial behavior, financial literacy, financial well-being, healthcare professionals

Introduction

Financial decisions form an integral part of our daily choices, and their impact can be favorable or unfavorable depending on how well we manage our daily expenses. The way we handle our financial choices can significantly shape our overall financial well-being. The magnitude of these budget-related matters tends to be particularly pronounced among young professionals as they

navigate the complexities of balancing income, expenses, and future financial goals. It is in this stage wherein a reasonable level of financial literacy is necessary. Young professionals must be mindful of the significance of having the right financial behavior through budgeting, control on spending, living within means, continuous monitoring of expenses, saving and planning for the future and unforeseen expenses.¹

In 2014, the largest and most comprehensive global measurement of financial literacy was conducted and showed that around 3.5 billion adults globally lack an understanding of basic financial concepts. The Philippines ranked in the bottom 30 of 144 countries

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surveyed. Only 25% of adult Filipinos are literate on the basics of finance.⁴

Bangko Sentral ng Pilipinas (BSP) survey also showed that only one percent of surveyed Filipino adults correctly answered questions on financial literacy. Financial literacy is a basic need for everyone to avoid difficulties that may occur from lack of financial planning or errors in financial management. Financial decisions also have psychological effects and can inflict psychological damage thus the impact of financial literacy on both financial behavior and sense of financial well-being should also be examined. Financial well-being is the state of being wherein a person can fully meet current and ongoing financial obligations, can feel secure in their financial future, and is able to make choices that allow enjoyment in life.⁵ Personal financial well-being has been associated with higher workplace productivity. Studies, including one on white-collar workers in a Midwestern insurance company and another in London involving the UK workforce, including healthcare professionals, support this association. Research indicates that individuals with better financial well-being report fewer health problems and demonstrate higher levels of productivity in their workplace.⁶⁻⁸

Cebu Velez General Hospital is the training hospital of the Cebu Institute of Medicine (CIM). It is a private, Level 3 General Hospital duty accredited with the Department of Health with a 200-bed capacity and has the following major departments: Internal Medicine, Surgery, Pediatrics, Obstetrics and Gynecology, Ophthalmology, and Family Medicine. There is no existing financial literacy program in this hospital. Participants in this institution were chosen for convenience sampling for its practicality and ease of access. Like other hospitals, this institution faces a noticeable shortage of staff. Evaluating the well-being of employees could provide practical insights and strategies to effectively address the staffing issue and maintain high-quality patient care.

One widely recognized tool used in assessing financial literacy is the Organization for Economic Cooperation and Development/ International Network on Financial Education (OECD/INFE) Financial Literacy and Financial Inclusion Measurement toolkit. It is designed to collect comparable information on the financial behavior, attitudes, and knowledge of the adult population that can be used to create scores to indicate their financial literacy level. The latest version updated in 2018 use statements designed by the Consumer Financial Protection Bureau (CFPB) of the USA. The aim of this toolkit has been to produce a measure of financial well-being based on analytical principles, and to help policy makers discuss financial well-being in a consistent manner internationally while also maintaining flexibility at the national level as well as other measures produced by the survey such as financial inclusion indicators.⁴ This is the survey tool used in this study.

Objectives

This study aimed to assess the degree of financial literacy of healthcare workers in Cebu Velez General Hospital and how this affected their personal financial well-being.

Specifically, the objectives of this study were to:

1. Assess financial knowledge, attitude, and behavior of healthcare professionals
2. Assess the financial well-being of healthcare professionals
3. Determine the association of socio-economic and demographic factors on financial behavior: Age, Gender, Marital Status, Occupation, Length of employment, and Income
4. Provide valuable information resource that will assist with the development of strategies to improve financial literacy and well-being

Operational Definition of Terms

Healthcare professionals - Healthcare professionals encompass individuals suited by education, training, and the necessary licensing, to perform a medical service. This group comprises resident physicians, registered nurses, medical technologists, physical and occupational therapists, radiologic technologists, and pharmacists employed specifically in Cebu Velez General Hospital at the time of data collection.

Financial Literacy. The financial ability which is a combination of awareness, knowledge, skill, attitude, and behavior necessary to make sound financial decisions and ultimately achieve individual financial well-being. This is a derived value that ranges between 1 and 21 and is calculated following the methodology described in the toolkit and consist of the sum of three elements: financial knowledge (takes the range 0 to 7), financial behavior (takes the range 0 to 9), and financial attitudes (takes the range 0 to 5). (see *Appendix*)

Financial Knowledge - The knowledge and understanding of basic concepts on finance computed as the number of correct responses to seven financial knowledge questions (QK3 to QK7_3) which covers inflation, interest, numeracy, and risk diversification.

Financial Attitude - This is computed as the average response across three attitude statements from the toolkit used to gauge respondents' attitudes towards money and planning for the future (QS1_1, QS1_2 and QS3_5). It ranges from 1 to 5.

Financial Behavior - Financial behavior is related to how people treat, manage, and use financial resources available, and is computed as a count of the number of financial behaviors relating to budgeting (QF1 ad QF2), active saving (QF3), avoiding borrowing to make ends meet (QF11 and QF12) choosing products (various Qprod questions are used, creating two points on this score), keeping watch on financial affairs (QS1_4), striving to achieve goals (QS1_6), making considered purchases (QS2_3), paying bills on time (QS2_5). It ranges between 0 and 9.

Financial well-being - The state of being wherein a person can fully meet current and ongoing financial obligations, can feel secure in their financial future, and is able to make choices that allow enjoyment of life. Each of the five statements from the toolkit can give up to five points to

the respondent depending on the answer (QS2_2, QS2_4, QS3_1, QS3_3, and QS3_4). Thus, the maximum achievable financial well-being score is 25 and the minimum is 5. A higher score is an indication of a higher level of measured financial well-being.

Significance of the Study. The significance of this study lies in its potential to shed light on the financial literacy issues within a healthcare institutional setting. Understanding the interplay between financial literacy and well-being among this group can have practical implications for targeted interventions. The findings may guide the development of financial education programs, aiming to improve the financial resilience, satisfaction, overall well-being of healthcare workers, and consequently, the quality of care they provide. Furthermore, the study's insights may contribute to broader discussions on workforce financial health and may serve as valuable resource for policymakers to formulate effective strategies to enhance the economic well-being of healthcare professionals in similar settings.

Methodology

Design and Population. In this descriptive cross-sectional survey study, 142 respondents were invited to participate in the online survey using the questionnaire developed by the Organization for Economic Cooperation and Development/ International Network on Financial Education (OECD/INFE).¹⁵ The participants were healthcare professionals including resident physicians, registered nurses, medical technologists, physical therapists, radiologic technologists, and pharmacists employed in Cebu Velez General Hospital at the time of data collection (Figure 1). Individuals from these professional categories who were no longer employed during the data collection period were excluded. This study attempted to do a total enumeration of all healthcare workers within the hospital and no sample size calculations were performed.

Data Collection Process. Access to the list of healthcare professional employees in Cebu Velez General Hospital was requested via a letter addressed to the medical director of the hospital. All healthcare workers were invited to participate in this web-based survey questionnaire in google form with an attached informed

consent. The survey questions covered personal and household characteristics, financial behavior and attitudes, financial knowledge, and perceptions of own financial well-being. This was supplemented with questions including socio-economic and demographic factors. The survey questionnaire is in the Appendix.

A thorough dataset was guaranteed by configuring the online survey to mandate response, eliminating any instances of missing data. The survey was conducted from April to May 2023 and the identities of all respondents remained anonymous. As an online survey, no budget allocation for monetary incentives was necessary.

Statistical Analysis. Summary statistics were taken for baseline characteristics and financial scores calculated following the methodology described in the OECD/INFE Toolkit. The financial literacy score, a derived value that ranges between 1 and 21, consists of the sum of three elements: financial knowledge score (takes the range 0 to 7), financial behavior score (takes the range 0 to 9), and financial attitude score (takes the range 1 to 5). Each of the three-score variable is itself computed based on the responses to several questions set to ascertain these attributes.

Financial well-being score is calculated based on the answers to five statements given four points or no points depending on the participant. Maximum achievable financial well-being score is 20 and the minimum is 0. It is suggested to interpret a higher score as an indication of a higher level of measured financial well-being. However, as this is a score based on a self-assessed scale, there is not a specific cut-off for a "good" or "bad" financial well-being score. Financial scores are then compared between demographic groups using independent *t test* and ANOVA. All statistical analyses are performed with an $\alpha = 0.05$ using IBM SPSS version 22.

Ethical Considerations. Healthcare workers were depersonalized and identified as participant number to observe confidentiality. Only data pertinent to the research topic as indicated in the questionnaires were obtained, processed, and analyzed. The survey was handled in accordance with RA 10173 otherwise known as the Data Privacy Act and approved by the Institutional Review Board of Cebu Institute of Medicine.

Results

Of the 142 healthcare professionals employed in Cebu Velez General Hospital from April to May 2023, three did not answer the online survey, thus were excluded. A total of 139 respondents participated in the online survey. Of these, the majority were nurses comprising 54.7% followed by physicians, and medical technologists.

Most of the participants are employed for < one year comprising 44.6% of the total participants followed by those employed for > 3 years with 32.4%. Majority of the respondents belong to the PHP 10,001 to 30,000 income bracket. Most participants were born to highly educated

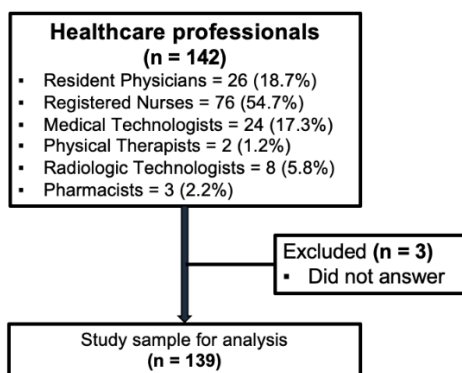


Figure 1. Study Workflow

Table I. Summary of Demographic Characteristics

| Demographic Characteristics | No. (%) (N=139) |
|------------------------------------|--------------------|
| Age, Years, Mean (SD) | 30.3 (8.7) |
| Gender, Male, Number (%) | 45 (32.4) |
| Marital Status, Single, Number (%) | 113 (81.3) |
| Occupation, Number (%) | |
| ▪ Physicians | 26 (18.7) |
| ▪ Nurses | 76 (54.7) |
| ▪ Medical Technologists | 24 (17.3) |
| ▪ Radiologic Technologists | 8 (5.8) |
| ▪ Pharmacists | 3 (2.2) |
| ▪ Physical Therapists | 2 (1.4) |
| Length of Employment, No. (%) | |
| ▪ < 1 year | 62 (44.6) |
| ▪ 1-2 years | 14 (10.1) |
| ▪ 2-3 years | 18 (12.9) |
| ▪ >3 years | 45 (32.4) |
| Income, Number (%) | |
| ▪ ≤ 3,000 PHP | 4 (2.9) |
| ▪ 3,001 – 5,000 PHP | 1 (0.7) |
| ▪ 5,001 – 10,000 PHP | 1 (0.7) |
| ▪ 10,001 – 20,000 PHP | 65 (46.8) |
| ▪ 20,001 – 30,000 PHP | 50 (36.0) |
| ▪ > 30,000 PHP | 18 (12.9) |
| Paternal Education, Number (%) | |
| ▪ High School | 9 (6.5) |
| ▪ Specialized Technical Training | 5 (3.6) |
| ▪ College | 99 (71.2) |
| ▪ Graduate School | 25 (18.0) |
| Maternal Education, Number (%) | |
| ▪ High School | 16 (11.5) |
| ▪ Specialized Technical Training | 1 (0.7) |
| ▪ College | 95 (68.3) |
| ▪ Graduate School | 27 (19.4) |

parents with at least a college education. The mean age of participants was 30.3 years ± 8.7 years. The majority of respondents were female with males comprising only 32.4% of the participants. Most of the participants are single (113 or 81.3%). *Table I* shows the summary of these demographic characteristics of the population in study.

Table II summarizes the mean scores of participants categorized into demographic characteristics. Overall, the mean Financial Literacy score was 13.7 (± 2.4) over a total score of 21 points. The mean Financial Well-being score amongst the participants was 8.3 (± 3.2) over 20 points. The results are represented graphically as follows.

Financial Literacy and Well-being by sex are shown in *Figure 2*. The differences were not statistically significant. Knowledge scores varied significantly with age and type of occupation. Financial attitude varied significantly with marital status with married participants having a slightly higher score (3.24 vs 3.20) as shown in *Figure 3*. Overall Financial Literacy scores varied significantly with occupation with physicians gaining higher scores relative to other occupations as shown in *Figure 4*. The same

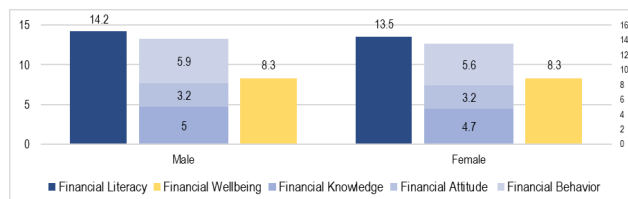


Figure 2. Financial Literacy and Wellbeing Scores by Sex

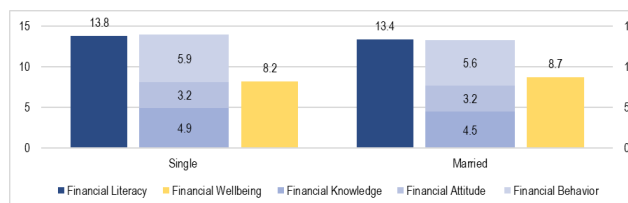


Figure 3. Financial Literacy and Wellbeing Scores by Marital Status

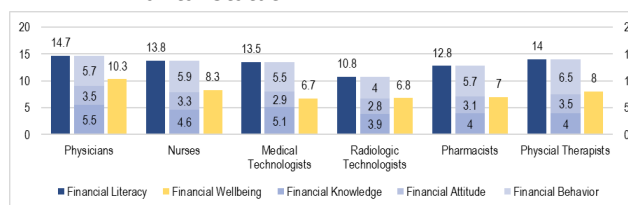


Figure 4. Financial Literacy and Wellbeing Scores by Occupation

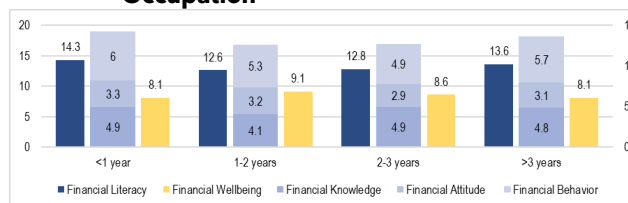


Figure 5. Financial Literacy and Wellbeing Scores by Length of Employment

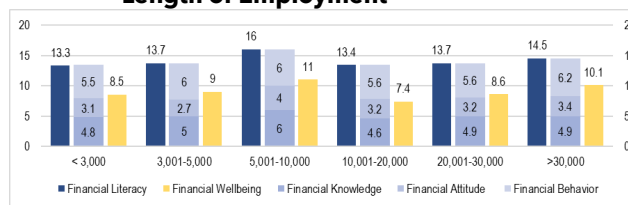


Figure 6. Financial Literacy and Wellbeing Scores by Income

figure shows that financial well-being likewise varied significantly with the occupation with again physicians having higher well-being scores (10.3, ± 2.5). Statistically significant difference was likewise noted on the length of employment with newly employed participants and those employed for > 3 years gaining higher scores (14.3 and 13.6 respectively) as shown in *Figure 5*.

In addition, well-being was higher amongst participants with higher income as shown in *Figure 6* with those earning >PhP 30,000 per month having higher scores. No variances were noted in the PhP 3,001 - 5,000 and PhP 5,001 - 10,000 per month income brackets and thus were excluded from this analysis.

Table II. Summary of Financial Literacy and Well-being Scores

| | Financial Knowledge (7) | p | Financial Attitude (5) | p | Financial Behavior (9) | p | Financial Literacy Score (21) | p | Financial Well-being Score (20) | p |
|----------------------------------|-------------------------|------|------------------------|------|------------------------|------|-------------------------------|------|---------------------------------|------|
| Overall, Mean (SD) | 4.8 (1.2) | - | 3.2 (0.8) | - | 5.7 (1.7) | - | 13.7 (2.4) | - | 8.3 (3.2) | - |
| Age | - | 0.01 | - | 0.69 | - | 0.73 | - | 0.18 | - | 0.99 |
| Sex | 4.83 | | | | | | | | | |
| Male | 5.0 (1.2) | 0.83 | 3.2 (0.9) | 0.15 | 5.9 (1.7) | 0.90 | 14.2 (2.4) | 0.88 | 8.3 (3.4) | 0.39 |
| Female | 4.7 (1.2) | | 3.2 (0.8) | | 5.6 (1.7) | | 13.5 (2.4) | | | |
| Marital Status | | | | | | | | | | |
| Single | 4.9 (1.2) | 0.57 | 3.2 (0.8) | 0.03 | 5.7 (1.7) | 0.99 | 13.8 (2.5) | 0.90 | 8.2 (3.4) | 0.22 |
| Married | 4.5 (1.2) | | 3.2 (1.0) | | 5.7 (1.7) | | 13.4 (2.3) | | 8.7 (2.6) | |
| Occupation | | | | | | | | | | |
| Physicians | 5.5 (0.9) | 0.00 | 3.5 (0.8) | 0.13 | 5.7 (1.7) | 0.08 | 14.7(2.4) | 0.00 | 10.3 (2.5) | 0.00 |
| Nurses | 4.6 (1.2) | | 3.3 (0.8) | | 5.9 (1.6) | | 13.8(2.3) | | 8.3 (3.0) | |
| Medical Technologists | 5.1 (1.1) | | 2.9 (0.7) | | 5.5 (1.6) | | 13.5(1.8) | | 6.7 (3.8) | |
| Radiologic Technologists | 3.9 (1.1) | | 2.8 (0.9) | | 4.0 (1.9) | | 10.8(2.8) | | 6.8 (1.8) | |
| Pharmacists | 4 (1.7) | | 3.1 (1.2) | | 5.7 (2.1) | | 12.8 (4.9) | | 7.0 (4.4) | |
| Physical Therapists | 4 (1.4) | | 3.5 (0.2) | | 6.5 (0.7) | | 14.0 (0.9) | | 8 (4.2) | |
| Length of Employment, Number (%) | | | | | | | | | | |
| < 1 year | 4.9 (1.2) | 0.09 | 3.3 (0.8) | .19 | 6.0 (1.5) | 0.09 | 14.3 (2.4) | 0.03 | 8.1 (3.2) | 0.69 |
| 1-2 years | 4.1 (1.3) | | 3.2 (0.9) | | 5.3 (1.6) | | 12.6 (2.2) | | 9.1 (3.9) | |
| <3 years | 4.9 (1.1) | | 2.9 (0.8) | | 4.9 (1.8) | | 12.8 (2.6) | | 8.6 (3.8) | |
| >3 years | 4.8 (1.2) | | 3.1 (0.8) | | 5.7 (1.8) | | 13.6 (2.3) | | 8.1 (2.9) | |
| Income (PHP) | | | | | | | | | | |
| ≤ 3,000 | 4.8 (1.0) | 0.72 | 3.1 (0.7) | 0.75 | 5.5 (2.4) | 0.83 | 13.3 (1.7) | 0.57 | 8.5 (3.7) | 0.04 |
| 3,001 – 5,000 | 5 (0) | | 2.7 (0) | | 6 (0) | | 13.7 (0) | | 9 (0) | |
| 5,001 – 10,000 | 6 (0) | | 4.0 (0) | | 6 (0) | | 16 (0) | | 11 (0) | |
| 10,001 – 20,000 | 4.6 (1.3) | | 3.2 (0.6) | | 5.6 (1.7) | | 13.4 (2.6) | | 7.4 (3.2) | |
| 20,001 – 30,000 | 4.9 (1.2) | | 3.2 (0.9) | | 5.6 (1.6) | | 13.7 (2.3) | | 8.6 (3.2) | |
| > 30,000 | 4.9 (1.1) | | 3.4 (1.0) | | 6.2 (1.8) | | 14.5 (2.2) | | 10.1 (2.8) | |

Table III. Multiple Regression Model of Predictors of Financial Well-being (n=139)

| Predictors | Coefficients | p Value |
|--------------------------|--------------|---------|
| Age | -0.016 | 0.717 |
| Sex | -0.170 | 0.771 |
| Marital Status | 0.298 | 0.750 |
| Occupation | -0.875 | 0.003 |
| Income | 0.377 | 0.212 |
| Financial Literacy Score | 0.031 | 0.787 |

A multiple regression analysis (Table III) was performed to predict Financial Well-being from Financial Literacy scores with age, marital status, occupation, and income as co-predictors. Since financial literacy is a derivative of financial knowledge, attitude, and behavior these predictors are highly likely to present with multicollinearity which can adversely affect the analysis and as such were excluded from this analysis. The model statistically significantly predicted the Financial well-being score, $F(7,131) = 2.087, p = 0.049, R^2 = 0.10$. However, the independent variables account for only 10% of the variances in the financial well-being score of respondents. Additionally, only occupation statistically

significantly contributed to the prediction model. Financial literacy scores did not show a statistically significant contribution in predicting financial well-being scores.

Discussion

Financial Knowledge. Data from various studies and surveys on financial literacy among Filipinos yielded equivocal results with most Filipinos having no concrete grasp on financial management. In a survey conducted last 2014, the Philippines ranked in the bottom 30 of 144 countries surveyed with only 25% of adult Filipinos are literate on the basic financial concepts including risk diversification, inflation, numeracy, and compound interest.⁴ In our study, 56% of participants achieved a score of at least five of seven for financial knowledge indicating that many healthcare workers in Cebu Velez General Hospital are currently unable to reach the minimum target score.

This also aligns with the global trend reflected in the international survey using the globally recognized OECD/INFE toolkit participated by 30 countries published last 2016 and by the modified and defined OECD/INFE 2018 toolkit participated by 26 countries published last 2020, indicating a need for

comprehensive financial education efforts both locally and internationally to address this challenge and enhance financial knowledge and management skills.^{11,15}

The results of our survey also indicated that many participants struggle with basic concepts in finance most especially compound interest and diversification. Only 25.9% were aware of the implications of compounding and only 57.55% were aware of the benefit of diversification. Only 44.6% knew what would happen to the purchasing power of money if inflation stayed at the same rate for one year although 95.68% of participants knew the meaning of inflation. Majority of the participants or 96.4% appear to understand the concept of interest without difficult arithmetic. 66.19% were able to calculate simple interest on savings. 77.7% understood the typical relationship between risk and return.

In the two international surveys using the OECD/INFE toolkit, concept on compound interest has been consistently an area of financial knowledge considered to be problematic along with concept on risk and diversification.^{11,15} Understanding simple interest has been the most widely answered correctly. The Standard & Poor's Ratings Global Financial Literacy Survey conducted last 2014 and participated by > 150,000 national representatives and randomly selected adults in 144 countries is considered as the most comprehensive global gauge of financial literacy. In this survey, the literacy questions that measure the four fundamental concepts for financial decision-making included basic numeracy, interest compounding, inflation, and risk diversification. Among the four concepts, inflation and numeracy were the most understood. Knowledge of risk diversification is the lowest which is also in line with the results of this study.⁴

The questionnaire also included a self-assessment of how the respondent feels their financial knowledge compares with others and it appeared that the majority of participants consider their financial knowledge to be at par with that of other professionals in the same institution. The average score for people who considered themselves to have high or very high levels of financial knowledge is no higher than those who thought that they were the same as most people. This suggests that at least some of those who rated themselves highly could be overconfident. Overconfidence bias can lead to a reduced perception of risk which may negatively impact strategic decision-making.⁷

In our study, financial knowledge scores varied significantly with age. This aligns with the Standard and Poor's Rating Services Global Financial Literacy Survey conducted in 2014 which showed that: in major advanced economies, 56% of young adults age 35 or younger are financially literate; and in major emerging economies, younger population also have the highest financial knowledge scores.⁴

Financial behavior. Financial well-being is greatly influenced by the actions and behaviors we exhibit. Practicing good financial habits like budgeting, saving, investing wisely, and avoiding unnecessary debt can

significantly impact long-term financial situation positively. The survey questionnaire incorporated questions to find out about financial behaviors of the participants. In our study, 80% of the total participants scored at least the minimum target score indicating that majority of healthcare workers in this institution are acting in ways that are likely to benefit their financial well-being now and in the future. It was reported that a small percentage of individuals demonstrated all the assessed behaviors while the majority exhibited at least some financially literate behaviors. This suggests that while not everyone displayed a complete set of financially responsible behaviors, many individuals were still engaging in certain financially knowledgeable actions. In the international survey using the globally recognized toolkit published last 2016 and the modified and defined toolkit published last 2020, 51% and 49% achieved the minimum target score respectively.^{11,15} This indicates that the healthcare workers in Cebu Velez General Hospital have comparably higher financial behavior scores on average.

The tool included questions designed to provide a comprehensive view of the extent to which people are actively managing their budget and showed that most participants (72% on average) take at least some responsibility for financial decisions. Majority (86% on average) of the participants were also identified to be active savers. Active savers demonstrate a behavior that enables them to balance and manage their income and spending patterns effectively. They are likely to be more resilient to financial shocks and better able to meet financial goals. It was also reported that 59% were keeping a close watch on their financial affairs, an important behavior that could assist them in effectively managing their finances on a daily basis.

Only 58% reported that they have long-term financial goals and are actively working towards achieving them. This indicates a tendency for many to prioritize short-term goals over those that require a longer time horizon. Planning for long-term goals should be strengthened. Most people (82% on average) agreed or completely agreed that they carefully consider purchases. Timely bill payment is generally considered a standard practice for most (91% on average). Results also reported that majority of the participants (73% on average) had made an attempt to shop around for a recent financial product. Nearly half (53% on average) used information found on the internet, employer's advice, or general articles while minority (40% on average) sought independent guidance indicating that minority were willing to seek some information before committing to a financial product. The results showed that the weakest areas of financial behavior appear to be related to keeping a close watch on their financial affairs and financial goal setting. Financial goal setting is also a main problem in many countries.¹⁵

The tool also included questions asking whether the participant has experienced a situation wherein their income did not quite cover the living cost. The result showed that on average, 64% of the respondents had

been unable to make ends meet at some point in the previous 12 months. However, only a minority (3% on average) borrowed to make ends meet indicating that many were able to handle unexpected financial events or have set aside funds for emergencies. Most participants were born to highly educated parents with at least a college education. In a study conducted on the financial literacy of young professionals in the Philippines, it was shown that good childhood and proper family guidance for young professionals confer benefits to result in higher financial knowledge and behavior.¹ This implies that parents play a crucial role in ensuring that young professionals are exposed to positive parental role models who can impart valuable financial knowledge and behavior early in their lives.

Financial Attitude. Financial Attitude is mostly associated with the perspective towards the future. Even if an individual has sufficient knowledge and ability to act in a particular way, their attitude can significantly influence their decision-making. The survey questionnaire included three attitude statements to gauge respondents' attitudes towards money and planning for the future. In our study, it showed that only 36% of healthcare professionals achieved the minimum target score for financial attitudes overall. Healthcare professional's attitudes around living for today and toward saving were more literate than their attitudes towards spending. Analysis of financial attitudes using the same tool in separate surveys also showed that many individuals have a tendency towards short-term security.^{11,15}

Financial attitude varied significantly with marital status with married participants having a slightly higher score (3.24 vs 3.20). Marital status can indeed influence attitudes toward pay and finances, often leading to greater importance placed on income and financial stability because they often share financial responsibilities and future goals with a spouse and potentially a family. This can influence their attitudes and decision-making regarding pay and financial matters consistent with the literature.¹⁸

Financial Literacy. The mean Financial Literacy Score among all participating healthcare professionals was 13.7 ± 2.4 over a total score of 21 points showing significant room for improvement. Results are consistent with a local study on financial literacy conducted among randomly selected young professionals in Quezon City last 2020 which revealed lack of financial literacy and perceived lower financial behavior.¹ In the global financial survey conducted last 2014, the result showed that only 1-in-3 adults are financially literate indicating that financial illiteracy is widespread.⁴

Although the majority of the healthcare workers in our institution were acting in ways that are likely to benefit their financial well-being, many were unable to reach the minimum target score for financial knowledge and majority did not achieve the minimum target score for financial attitude. Financial attitude serves as a reconciling factor between an individual's financial

knowledge and their financial behavior. Therefore, young professionals should cultivate a positive financial attitude to effectively harness the benefits of their financial knowledge. Having the right mindset and attitudes towards money is instrumental in translating knowledge into wise financial decisions and actions.¹

Overall Financial Literacy scores varied significantly with occupation with physicians gaining higher scores relative to other occupations. Although educational background is less important compared to with exposure aspect, it cannot be ignored in financial education.¹ This is also in line with the S&P Global FinLit Survey wherein financial literacy sharply increased with educational attainment which as stated, is strongly associated with math skills, as well as age and income.⁴ Other contributory factors may be further investigated in this aspect such as financial education in various forms specifically. Statistically significant difference was likewise noted on the length of employment with newly employed participants and those employed for > 3 years gaining higher scores (14.3 and 13.6 respectively). Although the length of employment can have a notable impact on an individual's financial literacy, various other factors including individual motivation, access to financial education, and personal financial habits are some key points to consider as well.

Financial well-being. Financial well-being is the ultimate objective of financial literacy. As defined by the Consumer Financial Protection Bureau (CFPB), consumers perceived financial well-being is the state of being wherein a person can fully meet current and ongoing financial obligations, can feel secure in their financial future, and is able to make choices that allow them to enjoy life. As this is a score based on a self-assessed scale, there is no specific cut-off for a "good" or "bad" financial well-being score. Most people's scores would tend to fall somewhere in the middle - extremely low or extremely high scores would be uncommon. In our study, the mean Financial Well-being score amongst the participants was 8.3 ± 3.2 or 41.5% over 20 points. This suggests that on average the surveyed individuals do not consider their financial situation to contribute positively to their well-being, but rather to add stress and worry. This suggests that healthcare professionals in this institution were more insecure over control of their finances, feel less confident about their ability to absorb financial shocks in the future, are more inclined to agree that their finances restrict their life choices and they are ultimately lagging in their long-term financial plans.

There is plenty of room for improvement. Financial well-being likewise varied significantly with the occupation with again physicians having higher well-being scores (10.3 ± 2.5). Again, other associated factors may be further investigated in this aspect. Similarly, well-being was higher amongst participants with higher income with those earning >PhP 30,000 per month having higher scores consistent with several studies. This correlation observed between well-being and financial capability in our study aligns consistently with findings from various other studies.^{17,19,20}

Conclusion

The findings suggest that despite good financial behavior among many healthcare professionals in a tertiary hospital in Cebu, there are significant gaps in financial knowledge and attitude. This highlights the importance of comprehensive financial education and support programs for these professionals. Addressing these gaps and fostering positive financial attitudes can contribute to the overall financial well-being and security of healthcare professionals, helping them make more informed and effective financial decisions.

Limitations of the Study. This study acknowledges several limitations. Firstly, the use of a convenience sample from a single healthcare institution introduces selection bias, limiting the generalizability of findings to the broader healthcare worker population. There is also potential for recall and self-protection bias in participant responses. However, efforts to mitigate biases were implemented. Total population sampling aimed to eliminate selection bias, ensuring inclusivity. Additionally, a validated survey tool was employed to minimize measurement errors and maintain consistency in assessing the variables of interest.

Recommendations

Offering financial education can be crucial, as it has a significant and positive impact on financial knowledge. Exposure and experience with financial education programs can be one of the most influential factors in enhancing financial literacy.¹ Providing accessible and comprehensive financial education opportunities can empower individuals to acquire the knowledge and skills needed to make informed financial decisions, ultimately leading to improved financial well-being.

Starting financial literacy programs in schools or early in one's career can have far-reaching benefits. It not only equips individuals with the knowledge and skills needed for informed financial decisions but also helps address the broader issue of inadequate financial literacy in society. Furthermore, instilling positive financial habits and behaviors early, such as budgeting, saving, and planning for the future, can contribute to long-term financial well-being. Incorporating personal finance education into training, covering areas like budgeting, investments, estate planning, and retirement, can indeed offer substantial and lasting advantages, both for individuals and society as a whole.

The observation that healthcare professionals' attitudes toward living for today and saving were more financially literate than their attitudes toward spending is noteworthy. While short-term changes in attitudes can be challenging, this insight allows for the development of targeted strategies that can potentially influence and guide more responsible spending behaviors among healthcare professionals, contributing to their overall financial well-being.

Since occupation was the only variable that statistically significantly contributed to the prediction model for financial literacy and well-being of healthcare workers,

we recommend to further analyze factors such as job fulfillment, burnout, as well as broader influences such as family background, social influences, and investment behavior. Investigating these additional factors can help identify not only the occupational factors but also the personal, social, and psychological elements that contribute to financial awareness and well-being. This research could lead to more targeted and effective interventions to support healthcare professionals in managing their financial health and overall job satisfaction.

The findings from the study on the importance of employer benefits for frontline healthcare workers highlight a significant relationship between the availability of major benefits and reduced financial difficulties. The recommendations stemming from this research, such as offering a core package of major benefits, providing support for career development, enhancing pay, and improving work conditions, can play a vital role in supporting the financial well-being of healthcare professionals. These actions, which not only contribute to their financial stability but also enhance their overall job satisfaction and quality of life, should be considered.¹⁷ Prioritizing the well-being of healthcare professionals through these measures can lead to a more motivated and satisfied workforce, which ultimately benefits both the individuals and the quality of healthcare services provided.

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References

1. de Castro, N., Salamat, L., & Tabor, M. (2020). Financial literacy of young professionals in the Philippines. *EPRA International Journal of Research and Development*, 5(3), 217-220.
2. Ahmad, F. A., White, A. J., Hiller, K. M., Amini, R., & Jeffe, D. B. (2017). An assessment of residents' and fellows' personal finance literacy: an unmet medical education need. *International journal of medical education*, 8, 192.
3. Lusardi, A. (2019). Financial literacy and the need for financial education: evidence and implications. *Swiss Journal of Economics and Statistics*, 155(1), 1-8.
4. Klapper, L., Lusardi, A., & Van Oudheusden, P. (2015). *Financial literacy around the world*. World Bank. Washington DC: World Bank.
5. Bureau, C. F. P. (2015). *Financial well-being: The goal of financial education*.

6. Nye, P., & Hillyard, C. (2013). Personal financial behavior: The influence of quantitative literacy and material values. *Numeracy*, 6(1), 3.
7. Kim, J., & Garman, E. T. (2004). Financial stress, pay satisfaction and workplace performance. *Compensation & Benefits Review*, 36(1), 69-76.
8. CEBR (2021) Financial well-being and productivity in the workplace. London
9. Financial Capability Study. 2013 [10. FINRA. National financial capability study methodology. 2017 [cited 21 March 2017];
10. Green, M., & Elliott, M. (2010). Religion, health, and psychological well-being. *Journal of religion and health*, 49(2), 149-163.
11. OECD (2020), OECD/INFE 2020 International Survey of Adult Financial Literacy
12. Lusardi, A., & Oggero, N. (2017). Millennials and financial literacy: A global perspective. *Global Financial Literacy Excellence Center*, 5, 17.
13. United States Agency for International Development (USAID) Financial Sector Transformation Project June 2019 survey report
14. FINRA. National Financial Capability Study. 2014 [cited 21 March 2017];
15. OECD (2018), OECD/INFE Toolkit for Measuring Financial Literacy and Financial Inclusion
16. Atkinson, A., & Messy, F. A. (2012). Measuring financial literacy: Results of the OECD/International Network on Financial Education (INFE) pilot study.
17. Despard, M., Fox-Dichter, S., Zheng, H., Anderson, G., Borland, O., & Gilbert, K. (2022). Financial Well-being of Frontline Healthcare Workers: The Importance of Employer Benefits.
18. Gorman, E. H. (2000). Marriage and money: The effect of marital status on attitudes toward pay and finances. *Work and Occupations*, 27(1), 64-88.
19. Wagner, J. (2019). Financial education and financial literacy by income and education groups. *Journal of Financial Counseling and Planning*, 30(1), 132-141.
20. Xiao, J. J., Chen, C., & Chen, F. (2014). Consumer financial capability and financial satisfaction. *Social indicators research*, 118, 415-432.
21. Singh, R. P. (2020). Overconfidence: A common psychological attribute of entrepreneurs which leads to firm failure. *New England Journal of Entrepreneurship*, 23(1), 25-39.
22. FINRA. Investor knowledge quiz; a helpful guide to learning more about investing. 2012
23. FINRA. Financial capability in the United States; report of fundings from the 2012 National

APPENDIX

Financial Literacy Questions, Data Preparation, and Creation of Financial Literacy Scores

The table below is intended to help create comparable financial literacy scores. The table indicates questions that could be useful in analyzing financial well-being. These are the questions used in this survey.

I. Personal and Household Characteristics

| Question | How this question has been used in previous OECD studies | Information Collected |
|----------------|--|------------------------------|
| Q1 | Demographic variables | Age |
| Q2 | | Gender |
| Q3 | | Marital status |
| Q4, Q4_a | | Occupation |
| Q5, Q6 | | Paternal/ Maternal education |
| Q7 | | Type of community |
| Q8, Q8_a, Q8_b | | Household composition |

II. Planning and Managing Finances

| Question | | Information Collected | Possible Responses | Creating Financial Scores |
|------------------|--|---|--------------------|--|
| BUDGETING | | | | |
| QF1_a | Do you make day-to-day decisions about your own money? | Explore whether the respondent has responsibility for decision about personal money (personal budget) | Yes/No | Financial behavior score: [1] point if personally or jointly responsible for money management (QF1= 1 or 2) AND has a budget (QF2=1). [0] in all other cases |

| | | | | |
|---|---|---|---|---|
| QF1 | Who is responsible for making day-to-day decisions about money in your household? | Household budget | Multiple Choice a. makes these decisions by him/herself b. with someone else c. Someone else | |
| QF2 | Do you do any of the following for yourself or your household? | Explore the respondent's behaviors related to budgeting (money management) | Several responses are possible a. Make a plan to manage your income and expenses b. Keep a note of your spending c. Keep money for bills separate from day-to-day spending money d. Make a note of upcoming bills to make sure you don't miss them e. Use a banking app or money management tool to keep track of your outgoings f. Arrange automatic payments for regular outgoings g. Do Nothing | |
| ACTIVE SAVING AND FINANCIAL STOCKS | | | | |
| QF3 | In the past 12 months, have you been personally saving money in any of the following ways, whether or not you still have money? | Allows the respondent to identify a range of ways in which they are exhibiting saving behavior in the past 12 months (various forms of active saving) | Several responses are possible a. Saving cash at home or in your wallet b. Paying money into a savings/deposit account c. Giving money to family to save on your behalf d. Buying bonds or time deposits e. Investing in crypto-assets or ICOs f. Investing in stocks and shares g. Saving or investing in some other way, other than a pension h. None of the above | Financial behavior score: [1] point for any type of active saving (a,c,d,e,f,g), and relevant options added at the national level [0] in all other cases. Letting money build up in a bank account is not considered to be active saving (answer b) and gives 0 points towards the score. A refusal is scored as 0. |
| QF4 | If you, personally faced a major expense today – equivalent to your own monthly income – would you be able to pay it without borrowing the money or asking family or friends to help? AND IF NECESSARY, if you do not currently have an income, please think about an unexpected expense equivalent to the amount of money you typically spend in a month. | Indicates access to existing resources for an unexpected expense and may be an aspect of financial well-being | Yes/No | Financial resilience in the face of an expenditure shock |
| FINANCIAL GOALS | | | | |
| QF5 | Some people set themselves financial | Identifies people that have one or more | Yes/No | Used in additional analyses |

| | | | | |
|------------------|---|--|---|---|
| | goals, such as paying university fees, buying a car or a house, or becoming debt free. Do you (personally, or your household) have any financial goals? | financial goals, either alone or with their partner (goal setting) | | |
| QF6 | What is your most important financial goal? | Most important goal | Open question | If QF1 = Yes; Optional question, could be useful when designing financial education programs targeted to specific needs |
| QF7 | What actions have you (personally) taken to meet your most important goal? | Identifies the types and combination of actions taken to meet a goal. The question is intended to identify the behavior of the respondent (actions to meet goal) | Several responses are possible a. Prepared a plan of action b. Increased your credit card or loan repayments c. Saved or invested money d. Looked for new/different/additional source of income e. Identified a source of credit f. Cut-back on spending g. Something else | If QF1 = Yes |
| RETIREMENT PLANS | | | | |
| QF8 | How confident are you that you have done a good job of making financial plans for your retirement? | simple indicator of the level of confidence that the respondent is/will be comfortable in retirement | 5-point scale 1= very confident 5= not at all confident | confidence that retirement plans are adequate |
| QF9 | How will you/ or do you fund your retirement? | Identifies the types and combination of actions taken to fund retirement (method of funding retirement) | Several responses are possible a. Draw a government pension/ old-age benefit b. Draw an occupational or workplace pension plan c. Draw a private pension plan d. Sell your financial assets (such as: stocks, bonds or mutual funds) e. Sell your non-financial assets (such as a car, property, art, jewels, antiques, etc.) f. From income generated by your financial or non-financial assets (such as dividends or rental income) g. Rely on a spouse or partner to support you h. Rely on your children or other family members to support you i. Draw on your savings j. Continue to work k. From the revenues of a business that you own l. Something else m. Do not know | Useful when designing financial education programs and analyzing national trends. |

| | | | | |
|------------------|--|------------------------------------|--------|---|
| MAKING ENDS MEET | | | | |
| QF11 | Sometimes people find that their income does not quite cover their living expenses. In the last 12 months, has this happened to you, personally? | Used to filter respondents to QF12 | Yes/No | Used to identify respondents who were borrowing or failing to meet existing commitments in order to make ends meet. |

| | | | | |
|------|---|--|--|--|
| QF12 | What did you do to make ends meet the last time this happened? | Identifies the respondent's approach to making ends meet: make use of existing resources (a,b,c); additional resources (d,e,f); access credit by using existing contacts or resources (g,h,i,j,k,l); borrow from existing credit line (m,n); access additional credit (o,p,q,r,s); fall behind or go around arranged amount (t,u); or others | Several responses are possible a. Drew money out of savings or transfer savings into current account b. Cut back on spending, spend less, do without, delay a planned expense c. Sold something that you own d. Worked overtime, take an extra job, earn extra money e. Borrow from family, friends or the community f. Borrow from employer/salary advance g. Pawn something that you own h. Take a loan from your savings and loans clubs or others i. Take money out of a flexible mortgage account j. Apply for loan/withdrawal on pension fund k. Use authorized, arranged overdraft or line of credit l. Use credit card for a cash advance or to pay bills/buy food m. Take out a personal loan from a financial service provider n. Take out a payday loan o. Take out a loan from an informal provider/ moneylender p. Use unauthorized overdraft q. Pay bills late; miss payments | The answers may be used to design better information and advice for people who face such decisions or experiences in the future. Financial behavior score: Borrowing ends meet [0] if the respondent used credit to make ends meet, that is if he/she responded yes at any of the following (e,f,g,h,i,j,k,l,m,n,o,p,q) [1] in all other cases, including refusals and respondents who did not have problems in making ends meet |
| QF13 | If you lost your main source of income, how long could you continue to cover your living expenses, without borrowing any money or moving house? | Indicates flexibility in the face of an income shock and may be an aspect of financial well-being. | Multiple choice: Less than a week; At least a week, but not one month; At least one month, but not three months; At least three months, but not six months; Six months or more | Financial resilience in the face of an income shock |

III. Choosing and Using Financial Products and Services

| Question | | Information Collected/ Purpose | Possible Responses | Creating financial literacy scores |
|----------|--|---|---|---|
| Qprod1_a | Have you heard any of these types of financial products? | Used as a measure of financial inclusion; and used as a filter for Qprod1_b and Qprod1_c | Several answers are possible: b. private pension or retirement product c. mortgage or home-loan d. loan secured on property e. unsecured bank loan | Product awareness |
| Qprod1_b | Which of the following products is currently used by you or your family members? | Used to create variables of product holding as an indicator of financial inclusion | f. car loan g. credit card h. current/ checking/ payment account i. savings account | Product holding |
| Qprod1_c | In the last two years, which of the following types of financial products have you used (personally or jointly) whether or not you still hold them? | Used as filter to find out about financial product choice | j. Microfinance loan k. Insurance l. Stocks and shares m. Bonds n. Mobile/ cell phone payment account o. Prepaid debit card/ payment card p. Crypto-assets q. Mobile banking | Product choice |
| Qprod2 | Which of the following statements best describe how you made your most recent choice of a financial service? (If responded any yes to Qprod1_c) | Asks about the extent to which the respondent looked at the alternative products available. A derived variable is created that indicates whether respondents made an attempt to shop around (shopping around) | Only one answer: a. I considered several options from different companies before making my decision b. I considered various options from one company c. I didn't consider any other options at all d. I looked around but there were no other options to consider | (choosing products) Financial behavior score: constructed by creating two intermediate variables, and then creating a derived variable <u>Two intermediate variables:</u> |
| Qprod3 | Which of these sources of | This question captures information about the | Several responses are possible | |

| | | | | |
|--------|---|---|---|---|
| | information do you feel most influenced your most recent decision? (If responded any yes to Qprod1_c) | extent to which the respondent made use of different types of information or guidance. (information source) | <ul style="list-style-type: none"> a. Specialist product comparisons or best-buy guidance (such as specialist magazine or a price comparison website) b. A recommendation from an independent financial advisor c. Information from an advert, or a booklet about this specific product d. A recommendation from friends, family members e. Information provided by bank staff (in person, online or over the phone) f. Some other type of information | <p>1. Qprod_D1: Tried to compare across providers taking value of: [1] if variable Qprod2 is equal to a or d, and [0] otherwise</p> <p>2. Qprod_D2: Sought information or advice taking values [2] if yes at any of Qprod3 a or b [1] if yes at any of Qprod3 c,d,e,f [0] otherwise</p> <p><u>The final variable</u> tried to shop around or use independent info or advice takes the following values: [2] if QProd_D2 =2 indicates used independent info or advice [1] if QProd_D1 = 1 or QProd_D2 = 1. indicates some attempt to make informed decision [0] Otherwise. indicates no attempt to make informed decisions (including no recent product choice).</p> |
| Qprod4 | In the last 2 years, have you experienced any of the following issues with financial products? | | <p>Several responses are possible</p> <ul style="list-style-type: none"> a. Invested in a financial product that you later found to be a scam, such as a pyramid scheme b. Provided financial information in response to an email or phone call that you later found out was not genuine c. Discovered that someone has used your card details to pay for goods without your authorization d. Queried a transaction listed on your bank or credit card statement that you did not recognize e. Made a formal complaint about the service you have received from a bank or other financial institution f. Tried to open a bank account and been refused for any reason g. Been refused a claim on an insurance product that you expected to cover you h. Complained to a remittance provider about high charges when sending or receiving money i. Lost money as a result of hackers or phishing scams j. None | |

IV. Attitudes and Behavior

| Question | | Information Collected/ Purpose | Possible Responses | Creating financial literacy scores |
|----------|--|--|--|--|
| QS1_1 | I find it more satisfying to spend money than to save it for the long term | Intended to indicate whether the respondent agree or disagree to each of the statements; focuses exclusively | 5-point scale 1= completely agree; 5 = completely disagree | Saving and the long-term |
| QS1_2 | Money is there to be spent | | | Used to compute for Financial Attitude Score |
| | | | | Long-term |

| | | | | |
|-------|--|--|--|---|
| | | on the short term (agrees) or has a preference for longer-term security (disagrees). | | Used to compute for Financial Attitude Score |
| QS1_3 | I am satisfied with my present financial situation | | | |
| QS1_4 | I keep a close personal watch on my financial affairs | | | Keeping watch of financial affairs Financial behavior score: [1] point for any respondents who put themselves at 1 or 2 on the scale (agree) [0] in all other cases. |
| QS1_5 | My financial situation limits my ability to do the things that are important to me | | | |
| QS1_6 | I set long term financial goals and strive to achieve them | | | Long term financial goal setting Financial behavior score: [1] point for any respondents who put themselves at 1 or 2 on the scale (agree) [0] in all other cases. |
| QS1_7 | I have too much debt right now | | | |
| QS2_1 | I tend to worry about paying my normal living expenses | How often the statements apply to the respondent | 5-point scale 1= always 2= often 3= sometimes 4= rarely 5= never | Considered purchase Financial behavior score: [1] point for any respondents who put themselves at 1 or 2 on the scale (agree) [0] in all other cases. |
| QS2_2 | My finances control my life | | | |
| QS2_3 | Before I buy something I carefully consider whether I can afford it | | | |
| QS2_4 | I have money left over at the end of the month | | | |
| QS2_5 | I pay my bills on time | | | |
| QS3_1 | Because of my money situation, I feel like I will never have the things I want in life | How well the statements describe the respondent | 5-point scale 1= completely 2= very well 3= somewhat 4= very little 5= not at all | |
| QS3_2 | If a shop keeper gave me too much change, I would probably keep it | | | |
| QS3_3 | I am concerned that my money won't last | | | |
| QS3_4 | I am just getting by financially | | | |
| QS3_5 | I tend to live for today and let tomorrow take care of itself | | | |

Financial Behavior Score is computed from the following values: QF1 and QF2 (1 point), QF3 (1), QS1_4 (1), QS1_6 (1), QS2_3 (1), QS2_5 (1), Qprod2 and Qprod3 (2), and QF12 (1) for a total of 9 points.

Financial Attitude Score is computed as the sum of the values for the three statements (QS1_1, QS1_2, and QS3_5) and then divided by three. The attitude score, therefore, ranges from 1 to 5.

V. Financial Knowledge

| Question | | Information Collected/ Purpose | Possible Responses | Creating financial literacy scores |
|----------|--|---|---|---|
| QK1 | How would you rate your overall knowledge about financial matters compared with other adults in this Institution? | Self-rated assessment of financial knowledge | - | - |
| QK2 | Imagine that five siblings are given a gift of 50,000 in total. If the siblings have to share the money equally, how much does each one get? | To test ability to undertake basic mental arithmetic in a financial context | Open response (Correct response = 10,000) | This is very easy and therefore does not add value in a knowledge score |

| | | | | |
|-------|--|---|--|---|
| QK3 | Now imagine that the five siblings have to wait for one year to get their share of the 50,000 and inflation stays at 7 percent. In one year's time will they be able to buy: | to test ability to understand how inflation impacts on purchasing power (Impact of inflation on spending power) | Multiple choice [Correct response depends on inflation used; less than they could buy today] | 1 for correct response; 0 in all other cases |
| QK4 | You lend 1,500 to a friend/acquaintance one evening and he gives you 1,500 back the next day. How much interest has he paid on this loan? | to test understanding of interest without difficult arithmetic (identification of interest) | Open response [Correct response = None/0] | 1 for correct response; 0 in all other cases |
| QK5 | Imagine that someone puts 5,000 pesos into a savings account with a guaranteed interest rate of 2% per year. They don't make any further payments into this account and they don't withdraw any money. How much would be in the account at the end of the first year, once the interest payment is made? | to test ability to calculate simple interest on savings (simple interest calculation) | Open response [Correct response = 5,100] | 1 for correct response; 0 in all other cases |
| QK6 | How much would be in the account at the end of five years under the SAME conditions? | to test whether respondent is aware of the implication of compounding | Multiple choice [Correct response = > PhP 5,500 pesos] | 1 for correct response if and only if the response to simple interest calculation (QK5) is also correct; 0 in all other cases |
| QK7_1 | If someone offers you the chance to make a lot of money it is likely that there is also a chance that you will lose a lot of money | to test whether respondent understands the typical relationship between risk and reward/return | True/False [Correct response is True] | 1 for correct response; 0 in all other cases |
| QK7_2 | High inflation means that the cost of living is increasing rapidly | to test understanding of the meaning of the term inflation | True/False [Correct response is True] | 1 for correct response; 0 in all other cases |
| QK7_3 | It is less likely that you will lose all of your money if you save it in > one place | to test whether respondent is aware of the benefit of diversification (risk diversification) | True/False [Correct response is True] | 1 for correct response; 0 in all other cases |

Financial Knowledge Score is computed as the number of correct responses to the financial knowledge questions as stated.

VI. Background information

| | Question | Information Collected/ Purpose | Possible Responses |
|-------|--|---|--|
| N1.1 | It is important for me to understand how taxes are used | How much the respondent agree or disagree with each statement | 5-point scale 1= completely agree 5= completely disagree |
| | If there is an opportunity to avoid paying taxes, you should go for it | | |
| | You will agree if your employer offers you part of your salary in an envelope | | |
| N1.2 | Have you ever used a loan/credit card of a bank or a credit union? | | Yes or No |
| N1.2B | Which of the following statements best describes your knowledge of your credit history? | | |
| N2 | Where do you complain if you have become a victim of illegal activities of a financial institution? | | |
| N3 | It's interesting for me to know more about how to manage my finances in the best possible way | | 5-point scale 1= completely agree 5= completely disagree |
| | Parents should teach their children how to manage finances | | |
| | I believe that children should be taught how to manage their finances at school | | |
| | I discuss money issues with my friends and family members | | |
| QD13 | level of your personal average monthly earnings, including your salary and income from other possible sources) | | |
| Q9 | category of people do you think you (your family) most likely falls into | | |