

Financial Literacy and Financial Well-Being of Nurses of a First-Class Province in the Philippines

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ABSTRACT. Financial decisions have short- and long-term consequences; thus, financial literacy plays an important role. More so, solid personal financial literacy is a building block of one's financial well-being. This descriptive-correlational study assessed the level of financial literacy and extent of the financial well-being of 178 randomly stratified nurses in a first-class province in the Philippines. Moreover, it determined the relationship between demographics, financial literacy, and financial well-being. A researcher-made questionnaire was utilized. Descriptive analysis employed frequency count, percentage distribution, and standard deviation. While correlational analysis through Pearson product-moment correlation, Point Biserial, Rank Biserial, and Spearman Rank Correlation. The overall level of financial literacy was "High" ($M=3.22$; $SD=0.39$), and the extent of the financial well-being was "Great" ($M=3.03$; $SD=0.46$). From the nurses' demographics, only monthly income [$r(176) = 0.223$, $p=0.003$] was associated with financial literacy. However, there

was no relationship between demographics and financial well-being. A significant finding was the correlation between nurses' financial literacy and financial well-being [$r_s(176) = 0.660$, $p=0.000$]. High monthly income influences the nurse's financial literacy. The higher the level of financial literacy, the better the financial well-being.

1.0. Introduction

Financial literacy is paramount in the individual's financial empowerment and day-to-day economic decisions, contributing to a sound financial system and economic growth of the country (Kumari, 2020; Organization for Economic Cooperation and Development [OECD], 2020; Goyal & Kumar, 2021). Moreover, digital financial literacy is pivotal in helping poor people towards financial inclusion, which can boost growth toward Sustainable Development Goals 2030 (United Nations, 2019; Hasan et al., 2021; Ozili, 2021). However, only thirty-three (33%) percent of adults worldwide are financially literate, and this is the major finding of the Standard and Poor's (S&P) study (Global Financial Literacy Excellence Center [GFLEC], 2022).

Several key United Nations Sustainable Development Goals 2030 can be achieved by attainment of financial well-being, which leads to a happy life, and it is influenced by a range of elements from the macroeconomic environment to personal factors such as sociodemographic to financial socialization and practices (Bashir & Qureshi, 2023; Singh & Malik, 2022; She et al., 2023). Managing

personal finances, such as spending, borrowing, and increasing financial knowledge, is essential to improve financial well-being (Financial Consumer Agency of Canada [FCAC], 2021; Sehrawat et al., 2021). On the other hand, financially stressed employees have the likelihood of high employee turnover, increased burnout, depression, and decreased work productivity (Gualdrapa & Palic, 2020; Ford et al., 2020). Financial literacy influences financial well-being, so improving financial literacy skills and knowledge can lead to positive financial well-being (Lee et al., 2020; Rahman et al., 2021; Tahir & Richards, 2021; Prakash et al., 2022). Vital to nurses' competency is having financial literacy that contributes to financial decision-making in institution budgetary policies, in effect, leads to efficient healthcare service outcomes and attaining organizational goals (Goktepe et al., 2018; Vipond, 2018; Brydges et al., 2019; Holt, 2020). However, nurses have low financial literacy (Holt, 2020). In private hospitals, nurses' level of financial well-being is determined by their level of financial skills, satisfaction, and behavior, and there is a need to practice money management to achieve sustainability and financial productivity (Voros et al., 2021). The COVID-19 pandemic has negatively impacted nurses in terms of salary cuts and delayed financial remuneration despite heavy workload demands, leading to financial hardships,

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thus affecting their well-being (Billings et al., 2021; Meese et al., 2021).

The Philippine Statistics Authority 2018 Occupational Wage Survey revealed that private nurses' monthly earning is fourteen thousand, four hundred and ninety-two pesos (14, 492.00) pesos, and this suggests that Filipino nurses are living just above the poverty threshold (Baclig, 2021). Despite the efforts of Bangko Sentral ng Pilipinas, strengthening the financial literacy of Filipinos for better money management, poor financial planning, such as a lack of financial discipline to manage income and expenses, leads to unhealthy financial conditions, financial stress, and poor work performance in government workers like nurses (Parcia & Estimo, 2017; Gualdrapa & Palic, 2020; Bangko Sentral ng Pilipinas, 2020; Villagonzalo & Mibato, 2020). The small pay, financial stress, avoidance of investment schemes, and ultimately, the need to achieve financial well-being for unsung heroes-Filipino nurses propel the researcher to undertake the study.

Attaining employees' positive financial health or wellness needs an in-depth understanding of the role of financial literacy, financial stress, financial attitude, or behavior (Parcia & Estimo, 2017). Government employees, such as nurses on the front line against the COVID-19 pandemic, must deal with financial stress and physical well-being (Gualdrapa & Palic, 2020). Thus, it is imperative for employees, including nurses, to have a good state of financial wellness and financial management in a global health threat by focusing on improving financial knowledge that ultimately will aid in developing the right behavior or attitude in addressing financial stress as well as proper financial management to include debt or borrowing practices (Parcia & Estimo, 2017; Gualdrapa & Palic, 2020; Villagonzalo & Mibato, 2020).

This study assessed the level of financial literacy and the extent of financial well-being of public health nurses. The findings served as baseline information for the proposed Financial Literacy Program for nurses.

2.0. Framework of the Study

This study theorized that the nurses' financial well-being is affected by their age, gender, civil status, monthly income, number of dependents, and level of financial literacy. This study anchored on Joo's (1998) Conceptual Model of Personal Financial Wellness. This theory will confirm or refute the results of the association between the demographic variables and financial literacy level to the extent of nurses' financial well-being.

This model states that personal financial wellness is influenced by an individual's age, sex, marital status, income, and the number of household

dependents, as well as the level of financial literacy, which is a combination of financial knowledge and behavior (Joo, 1998). Moreover, an individual's financial satisfaction is directly and indirectly related to financial knowledge and behavior (Joo & Grabe, 2004).

From the perspective of the study, two elements can affect the financial well-being of nurses. One is the demographic profile, which includes age, gender, civil status, level of monthly income, and the number of dependents living with the nurses. Second, nurses' financial literacy level results from financial knowledge and behavior. Nurses need to understand financial concepts and possess positive, desirable behaviors in their financial activities.

3.0. Methodology

Research Design. A descriptive-correlational research design was utilized. Both the level of financial literacy and the extent of the financial well-being of nurses were established by the descriptive method. While the correlational method investigated the associations among demographics, financial literacy, and financial well-being.

Participants, Research Locale, Ethics. This study surveyed 178 permanent public health nurses assigned to various health facilities in a first-class province in the Philippines for 2022-2023, who were determined using stratified random sampling. Also, the ethical clearance guidelines set by the University graduate school were observed in the conduct of the study. Orientation was conducted, and informed consent was obtained for the voluntary participation of the participants. Confidentiality and privacy of the research participants were strictly complied with in adherence to the existing mandate of the Republic Act 10173, otherwise known as the Data Privacy Act of 2012. Raw information derived from research was protected, stored accordingly, and properly disposed of with no chance of future retrieval.

Data Collection and Survey Instrument. Research enumerators collected the data from both web-based surveys and printed forms. A researcher-made survey questionnaire was predominantly derived from the scholarly work of Parcia and Estimo (2017). The research survey instrument contained 52 checklist form items in a four-point Likert-type provision with two main domains, namely, financial literacy and financial well-being. Moreover, the mentioned domains have sub-domains: financial knowledge and financial behavior for financial literacy, financial discipline, financial security, and financial resiliency for financial well-being. The domains mentioned above were assessed using a four-point scale.

Lawshe's (1975) content validity ratio of the modified survey questionnaire was 0.91; thus, it

was valid. Reliability was determined by calculating Cronbach's alpha with the following results: financial knowledge 0.908, financial behavior 0.922, financial literacy 0.945, and financial well-being 0.904, which indicated that the instrument is reliable.

Data analysis. Descriptive analysis employed frequency count, percentage distribution, mean, and standard deviation in determining the level of financial literacy and the extent of the financial well-being of nurses. Correlational analyses through Pearson product-moment correlation and Point Biserial determined the relationship between demographics and financial literacy. Rank Biserial and Spearman Rank Correlation established the relationship between demographics and financial well-being. Spearman Rank Correlation showed the association between financial literacy and financial well-being.

4.0. Results and Discussion

Level of Financial Literacy of Public Health Nurses

Financial literacy is a mix of financial knowledge and behaviors crucial in making healthy monetary decisions that affect the individual's well-being (Xiao & Porto, 2017). Table 1 presents that the overall level of financial literacy of public health nurses was "High" (M=3.22; SD=0.39). In terms of financial knowledge, older (M=3.28; SD=0.44, with higher monthly income (M=3.35; SD=0.42), and those with 2 or more dependents (M=3.30; SD=0.43) have a very high level of financial knowledge. On the other hand, in terms of nurses' financial behavior, those with higher income (M=3.31; SD=0.39) demonstrate a very high level of financial behavior. The overall rating indicates that nurses possess a basic understanding of money and can apply this knowledge in savings, investing, budgeting, spending, and borrowing. Perhaps this rating is also attributed to the degree of educational attainment and employment. The higher the level of education achieved, the more knowledge is gained, making financial decisions more thought of. Another factor is that employment provides more work opportunities to learn from financial situations.

In contrast to the findings of large, mixed population studies, only thirty-three (33%) percent of adults worldwide are financially literate (GFLEC, 2022). The study involved twenty-six countries across Asia, Europe, and Latin America, revealing low financial literacy (OECD, 2020). However, a study of employees of a Maritime school revealed that financial literacy was moderate (Parcia & Estimo, 2017). With this result, it highlighted the role of the level of education, which is in line with the studies of how higher educational levels affect the understanding of financial literacy (Santini et al.,

2019; Baihaqqy & Sari, 2020; Kadoya & Khan, 2020; Biswas & Gupta, 2021; Galapon & Bool, 2022). It would be prudent and beneficial that public health nurses be encouraged to pursue post-graduate studies, which could improve their professional growth while increasing their financial literacy.

The ratings in terms of financial knowledge that older nurses with higher monthly income and with 2 or more dependents have a very high level of financial knowledge indicate that as the individual grows older, he tends to learn from previous financial mistakes, and as income rises, the individual is motivated to acquire more financial knowledge and with two or more dependents, the higher sense of responsibility in terms savings, budgeting management, investments, and loans/debts.

On the other hand, in terms of nurses' financial behavior, those with higher monthly earnings completely demonstrate a very high level of financial behavior. This indicates that with higher monthly income, aside from acquiring more financial knowledge, there is a need to demonstrate prudent and non-impulsive future-oriented financial behavior in terms of savings, investing, budgeting, spending, and borrowing to protect their hard-earned money. The findings echoed previous research that higher-income persons were related to higher financial literacy (OECD, 2021). Also, those households in India having higher income bands have increased financial literacy (Biswas & Gupta, 2021).

Table 1
Level of Financial Literacy of Public Health Nurses

Variable	Financial Knowledge			Financial Behavior			Financial Literacy		
	M	SD	Int	M	SD	Int	M	SD	Int
Age									
Younger	3.19	0.42	Hi	3.21	0.39	Hi	3.20	0.37	Hi
Older	3.28	0.44	VH	3.21	0.42	Hi	3.25	0.41	Hi
Sex									
Male	3.12	0.44	Hi	3.15	0.41	Hi	3.13	0.41	Hi
Female	3.26	0.42	Hi	3.23	0.40	Hi	3.25	0.37	Hi
Civil Status									
Single	3.16	0.44	Hi	3.18	0.43	Hi	3.17	0.40	Hi
Married	3.26	0.42	Hi	3.23	0.38	Hi	3.24	0.37	Hi
Monthly Income									
Lower	3.14	0.41	Hi	3.15	0.40	Hi	3.15	0.37	Hi
Higher	3.35	0.42	VH	3.31	0.39	VH	3.33	0.38	VH
Number of Dependent									
0 to 1 Dependent	3.17	0.42	Hi	3.20	0.40	Hi	3.19	0.38	Hi
2 or more Dependents	3.30	0.43	VH	3.22	0.41	Hi	3.26	0.40	VH
Whole	3.22	0.43	Hi	3.21	0.40	Hi	3.22	0.39	Hi

Mean Scale: 1.00-1.75=Very Low (VL), 1.76-2.50=Low (Lo), 2.51-3.25=High (Hi), 3.26-4.00=Very High (VH)

Extent of Financial Well-being of Public Health Nurses

Financial Well-being is a state of financial affairs that is a by-product of financial discipline, financial security, and financial resilience (CFPB, 2018; FCAC, 2021; Kempson et al., 2017; Muir et al., 2017). Table 2 shows that the overall extent of the financial well-being of public health nurses was "Great" (M=3.03; SD=0.46). In terms of financial discipline, males (M=3.15; SD=0.52) with lower monthly income (M=3.22; SD=0.51) and those with 0 or 1 dependent (M=3.25; SD=0.49) scored great. Public nurses were great in terms of financial security (M=2.96; SD=0.55) and financial resiliency (M=2.88; SD=0.55). Generally, the overall rating is that nurses have a great extent of financial well-being.

This indicates that they could meet their present-day financial obligations, control financial affairs, and feel financially secure in the present and future. Further, they have the financial satisfaction and freedom to enjoy life and the ability to absorb financial setbacks.

The finding is related to Parcia and Estimo's (2017) study, which found that maritime school employees have a fair level of financial well-being yet might be challenging in times of financial crisis. Also, with adequate financial practices, cooperative members can have competent financial well-being (Damian & Marquez, 2019). In addition, teachers in Higher Education Institutions feel moderately financially secure, yet there are teachers on the extreme ends of high financial security and high financial pressure. This implies that financial well-being can vary (Galapon & Bool, 2022). Contrary to public school teachers, financial well-being was severely hindered by debts and problems with money management (Ferrer, 2018).

Although male nurses with lower monthly income and those with 0 or 1 dependent demonstrated great financial discipline, there is room for improvement. They must manage their debts properly and practice living within their means by controlling expenses to have some money left over (Muir et al., 2017; Consumer Financial Protection Bureau [CFPB], 2018). Being great in areas of financial

of age [$r(176)=0.055$, $p=0.602$], sex [$r(176)=0.132$, $p=0.080$], civil status [$r(176)=0.089$, $p=0.235$], and a number of dependents [$r(176)=0.085$, $p=0.257$] have no significant relationship between financial literacy of nurses. Hence, the null hypotheses are accepted. Meanwhile, in terms of monthly income [$r(176)=-0.223$, $p=0.003$], there is a significant relationship between the financial literacy of nurses. Thus, the null hypothesis is rejected.

The no correlation between age, sex, civil status, number of dependents, and financial literacy indicates that these demographics do not influence the level of financial literacy of public nurses. This finding is contrary to the previous studies of the demographic factors that affect the level of individual financial literacy level (Bawre & Kar, 2019; Cucinelli et al., 2019; Kadoya & Khan, 2020; Wagner, 2019; GFLEC, 2022). As people grow older, they become more financially literate (Kadoya & Khan, 2020), females are less financially literate due to lower self-confidence (Bucher-Koenen et al., 2021), being married increases financial knowledge through sharing money matters (Kadoya & Khan, 2020; Saranza et al., 2022) and having dependents affects financial literacy as the individual strives for financial welfare of the family (Parcia & Estimo, 2017). Perhaps other factors affect the financial literacy of public health nurses. One is the higher educational attainment compared to the general population. The other factor is financial experience in the workplace.

However, monthly earnings highly affect the level of nurses' financial literacy. As income and liquidity increase, there is a need to protect the wealth and invest in building more assets. Therefore, nurses are stimulated to strive for more financial education. The results confirmed prior expectations and previous studies (Parcia & Estimo, 2017; Shimizutani & Yamada, 2018; Kadoya & Khan, 2020; Lotto, 2020; Biswas & Gupta, 2021).

Table 2
Extent of the Financial Well-Being of the Public Health Nurses

Variable	Financial Discipline			Financial Security			Financial Resiliency			Financial Well-Being		
	M	SD	Int	M	SD	Int	M	SD	Int	M	SD	Int
Age												
Younger	3.26	0.51	VG	2.95	0.54	Gr	2.84	0.54	Gr	3.01	0.44	Gr
Older	3.27	0.53	VG	2.98	0.57	Gr	2.95	0.57	Gr	3.07	0.49	Gr
Sex												
Male	3.15	0.52	Gr	2.89	0.53	Gr	2.82	0.53	Gr	2.85	0.45	Gr
Female	3.31	0.51	VG	2.98	0.56	Gr	2.90	0.56	Gr	3.06	0.46	Gr
Civil Status												
Single	3.27	0.56	VG	2.88	0.59	Gr	2.75	0.60	Gr	2.96	0.50	Gr
Married	3.26	0.49	VG	3.00	0.52	Gr	2.95	0.50	Gr	3.07	0.43	Gr
Monthly Income												
Lower	3.22	0.51	Gr	2.88	0.56	Gr	2.81	0.56	Gr	2.97	0.46	Gr
Higher	3.34	0.51	VG	3.08	0.52	Gr	2.99	0.51	Gr	3.13	0.44	Gr
Number of Dependent												
0 to 1 Dependent	3.25	0.49	Gr	2.94	0.52	Gr	2.86	0.55	Gr	3.02	0.44	Gr
2 or more Dependents	3.28	0.56	VG	2.98	0.60	Gr	2.90	0.56	Gr	3.05	0.50	Gr
Whole	3.26	0.52	VG	2.96	0.53	Gr	2.88	0.53	Gr	3.03	0.46	Gr

Mean Scale: 1.00-1.75=Very Poor (VP), 1.76-2.50=Poor (Po), 2.51-3.25=Great (Gr), 3.26-4.00=Very Great (VG)

security and financial resilience indicates that nurses were comfortable in their current and future financial status and their ability to handle financial setbacks. Nurses need to set and attain financial objectives in the present and future to attain financial independence and enjoy life while having a savings buffer to absorb financial shock (Muir et al., 2017; CFPB, 2018; Collins & Urban, 2020).

Relationship between Financial Literacy and Demographics

Table 3 shows the relationship between financial literacy and age, sex, civil status, monthly income, and number of dependents of public health nurses. Using Point biserial and Pearson product-moment correlation, the findings present that the demographics

Table 3
Relationship between Financial Literacy and Demographics

Variable	r	df	p
Age	0.055	176	0.602
Sex	0.132	176	0.080
Civil Status	0.089	176	0.235
Monthly Income	0.223*	176	0.003
Number of Dependents	0.085	176	0.257

Note: *relationship is significant when $p \leq 0.05$

Relationship between Financial Well-Being and Demographics

Table 4 presents the relationship between financial well-being and the demographic factors of age, sex, civil status, monthly income, and number of dependents of public health nurses. Using Point biserial and Pearson product-moment correlation,

the findings present that the demographics of age [r(176)=0.055, p=0.602], sex [r(176)=0.132, p=0.080], civil status [r(176)=0.089, p=0.235], and a number of dependents [r(176)=0.085, p=0.257] have no significant relationship between financial well-being of nurses. Hence, the null hypotheses are accepted.

The no correlation between demographics and financial well-being indicates that these factors do not influence the extent of the financial well-being of public nurses. Perhaps this means that nurses' financial well-being is affected not only by socioeconomic elements but also by other determinants. For example, employment status, a permanent status, provides security of tenure. Also, physical health, being fit and in a sound mind, leads to productivity and satisfaction. Furthermore, organizational factors such as better salary and retirement benefits. The first-class province in the Philippines has implemented the salary standardization law, which increases the monthly income, and compared to the private sector, the retirement benefit is more attractive.

These results are opposite to findings of the previous studies wherein the demographic profile of respondents affects financial well-being (Bruggen et al., 2017; Chan et al., 2018; Zaimah, 2019; Mahdzan et al., 2020; Iramani & Lutfi, 2021; Zhou et al., 2021). Wherein old, male, married, with high income and no dependents have high financial well-being (Parcia & Estimo, 2017; Lusardi, 2019; Zaimah, 2019; Mahdzan et al., 2020; FCAC, 2021; Iramani & Lutfi, 2021; Zhou et al., 2021).

Table 4
Relationship between Financial Well-being and Demographics

Variable	r _s	df	p
Age	-0.001	176	0.989
Sex	0.082	176	0.275
Civil Status	0.120	176	0.110
Monthly Income	0.126	176	0.093
Number of Dependents	0.058	176	0.442

Note: relationship is significant when p<0.05

Relationship between Financial Literacy and Financial Well-Being

Table 5 shows the relationship between financial literacy and the financial well-being of nurses. The Spearman Rank correlation shows that financial literacy and financial well-being [r_s (176) =0.660, p=0.000] have a significant relationship. Hence, the null hypothesis is rejected. The correlation between nurses' financial literacy and financial well-being indicates that the level of financial literacy influences the extent of financial well-being. This implies that nurses have basic financial knowledge applied to their daily lives to meet their present needs, financial security, and financial freedom. The nurses' financial knowledge and appropriate financial behavior positively contribute to their financial security,

resilience, and discipline. Understanding financial concepts, budget, and debt management goes a long way to help and improve nurses' financial security in the present and future. Also, being cognizant of the value of having savings, the benefit of insurance, and understanding the need for various investments will strengthen the nurses' financial resilience in times of economic downturn.

In terms of financial behavior, nurses exhibit positive behavior that strengthens financial discipline to reach their financial goals. Moreover, nurses' habit of regularly saving money after each monthly pay while tracking expenses daily to look after financial affairs and savings goals builds financial prudence. In addition, nurses' shrewd spending enhances financial discipline. Finally, wisely borrowing money to explore the best possible investments builds a strong foundation for financial resilience. Having a savings buffer for future preparation in times of financial crisis or to enjoy life to the fullest is key for nurses' financial independence. Thus, the higher the nurses' level of financial literacy, the better their financial well-being.

This finding echoed earlier studies that financial literacy has a positive influence on one's financial well-being (Bourova et al., 2018; Limbu & Sato, 2019; Lee et al., 2020; Pahlevan Sharif et al., 2020; GFLEC, 2022). Moreover, financial literacy is directly linked to financial satisfaction (Adiputra, 2021). Meanwhile, financial behavior as a component of financial literacy has a positive impact on one's financial well-being (Mahdzan et al., 2019; Riitsalu & Murakas, 2019; Younas et al., 2019; Utkarsh et al., 2020; Aziz et al., 2021). Conversely, a study revealed no relationship between financial literacy and financial well-being (Galapon & Bool, 2022).

Table 5
Relationship between Financial Literacy and Well-being

Variable	r _s	df	p
Financial Literacy x Well-Being	0.660*	176	0.000

Note: *relationship is significant when p<0.05

5.0. Conclusion

The findings of the study suggest the need to understand the importance of spending, savings and investing, budgeting, and debt management as the monthly earnings rise. Complement with a demonstration of practical and prudent financial behaviors in the areas mentioned, it is possible to attain financial freedom while enjoying life to the fullest. As professionals, the results imply the significance of valuing work as a source of salary and overall well-being. Further, it suggests that pursuing further education is a means to improve employment rankings, thereby creating opportunities for more income.

6.0. Limitations of the Findings

This study acknowledged limitations of the findings such as sample size, nurses as the only respondents, restricted to one province, and only demographics of age, sex, civil status, monthly income, and number of dependents. In effect, it cannot claim the exact nurses' level of financial literacy and extent of financial well-being. Relative to the quantitative descriptive-correlational research design, the depth of analysis is also restricted.

7.0. Practical Value

As there is a strong relationship between financial literacy and financial well-being, the Human Resource Management Office may utilize the proposed output-financial literacy program for nurses to further enhance their level of financial knowledge and foster necessary financial behaviors, ultimately improving their state of financial discipline, financial security, and financial resilience.

In addition, the output of this study may provide employees with learning and guidelines for practicing financial discipline in money management for financial security and in handling financial setbacks.

8.0. Directions for Future Research

To enhance the sample size, other healthcare professionals, larger geographical coverage, and other determinants or variables would increase the generalizability of the study. Further, they may also conduct studies utilizing mixed methods to combine detailed insights from qualitative approaches and generalize quantitative research utilizing standardized research instruments from the Standard and Poor (S & P) Global Financial Literacy Survey, Consumer Financial Protection Bureau (CFPB), and Organization for Economic Co-operation and Development International Network on Financial Education (OECD/INFE).

9.0. Declaration of Conflict of Interest

The authors reported no potential conflict of interest.

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