

Effect of Financial Literacy, Financial Management Application, and Savings Behavior on Retirement Readiness Moderated by Financial Knowledge and Financial Attitude (Study on Female Civil Servant in Waropen Regency)

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Abstract

Female civil servants tend to have lower levels of retirement readiness than men. This study examines the factors influencing retirement readiness: financial literacy, financial management application, and saving behavior. Moreover, this study also examines financial knowledge and attitudes as moderating variables. The research design uses quantitative research with a causal approach. The sample of this study was 286 female civil servants in the Waropen Regency. Data analysis uses the SEM-PLS method with the help of SmartPLS3 software. The analysis results show that financial literacy, financial management application, and saving behavior positively and significantly affect retirement readiness. Financial knowledge can moderate the financial management application to retirement readiness, but financial attitudes cannot moderate saving behavior towards retirement readiness. The study results provide significant implications for the government and management of the public sector, especially in Waropen Regency, to improve the retirement readiness of female civil servants.

Keywords

Retirement Readiness; Financial Literacy; Financial Management Application; Saving Behavior; Financial Knowledge; Financial Attitude



I. Introduction

Research on financial readiness in pension time has received concern recently (Farrar et al., 2019). The concern arises when many people face the pension age without sufficient retirement readiness, so they do not have the financial support (Poterba, 2014).

Compared to men, women are vulnerable to poverty, influenced by many factors such as educational inequality and opportunities to participate in economic activities (Chant, 2014). Women consistently show lower retirement readiness than men (Sabri et al., 2015). HSBC's 2018 global research results also show that women are financially less ready to retire than men. Nearly half (46%) of working-age women worldwide do not know how much pension they have to prepare for, or they do not have any savings.

Retirement readiness is a person's view and response to retirement and all things related (Kim et al., 2005). Although many individuals, such as public sector employees, receive pension benefits, the funds are still insufficient to meet their needs during retirement (Adam et al., 2017). The results of the 2016 Retirement Confidence Survey of the State and Local Government Workforce conducted by the TIAA Institute show that only 19% of public sector employees believe they have enough money to live comfortably during retirement. Therefore, even though public sector employees have pension benefits, they still have to prepare for retirement financial planning. Various factors affect retirement

readiness, including financial literacy (Sabri & Juen, 2014). Financial literacy helps individuals in financial decision-making and allows them to analyze opportunities and risks (Potrich et al., 2018).

Many studies prove that women have low levels of financial literacy and answer statements related to financial literacy correctly compared to men (M. Brown & Graf, 2013). In addition, based on the results of the 2016 National Financial Literacy and Inclusion Survey conducted by the Financial Services Authority (OJK), women in Indonesia have a lower financial literacy index than men, both in terms of composite, conventional, and sharia financial literacy indices. Human Resources (HR) is the most important component in a company or organization to run the business it does. Organization must have a goal to be achieved by the organizational members (Niati et al., 2021). Development is a change towards improvement. Changes towards improvement require the mobilization of all human resources and reason to realize what is aspired (Shah et al, 2020). The development of human resources is a process of changing the human resources who belong to an organization, from one situation to another, which is better to prepare a future responsibility in achieving organizational goals (Werdhiastutie et al, 2020).

Besides financial literacy, sound financial management also affects retirement readiness (Sabri et al., 2015). The primary difficulty experienced by people in preparing for retirement is planning and managing finances because it requires forecasting future needs (Hershfield et al., 2011).

The next factor influencing retirement readiness is saving behavior (Sabri et al., 2015). Several researchers have proven that saving behavior and saving regularly will lead to better retirement readiness (J. Kim et al., 2005). In addition to these three factors, this study examines financial knowledge and attitudes as moderating variables. Currently, not many studies use these two variables as moderating variables. Topa et al. (2018) examine psychological factors that influence retirement planning and readiness, recommending further researchers examine one's financial attitude concerning the effect of the desire to save on retirement financial planning. Then, Mohidin et al. (2013) examine the effect of personal financial planning attitudes (one of which is financial management) on retirement readiness, suggesting further researchers add financial knowledge variables to see differences in personal financial planning attitudes towards retirement readiness based on their financial knowledge level.

So far, researchers have not found any research on the retirement readiness of civil servants (PNS) in Papua Province or retirement readiness in isolated and disadvantaged regions. The research was conducted in Waropen Regency, a regency in Papua Province. This province has the highest percentage of poor people in Indonesia and is one of the disadvantaged areas in Papua Province. The underdevelopment of the Waropen Regency area is caused by low or difficult accessibility, economy, human resources, regional characteristics, and financial capacity.

Based on the Regional Medium-Term Development Plan (RPJMD) of Papua Province for 2019-2023, Waropen Regency is included in the "Difficult Access Plain" area category (BPPD Papua Province, 2019). Regarding transportation infrastructure, 70.5% of roads in the Waropen Regency are damaged and heavily damaged. Then, the telecommunications facilities installed in Waropen Regency have not been running well and have been unable to meet the community's needs. With limited access in terms of transportation and telecommunications, the financial facilities in Waropen Regency are also minimal. There are only three commercial banks available in the Waropen Regency:

Regional Papua Bank (BPD), Bank Rakyat Indonesia (BRI), and Bank Negara Indonesia (BNI).

Based on the background and conditions of the area, the researchers consider it crucial to examine the level of financial literacy, financial management application, saving behavior, financial knowledge, financial attitudes, and retirement readiness of female civil servants in disadvantaged areas with high poverty rate. This research has significant implications for increasing retirement readiness to reduce poverty in pension age in Indonesia's highest poverty areas rates.

II. Review of Literature

2.1 Retirement Readiness

Retirement is when employees are forced or allowed to leave the labor market (Mohidin et al., 2013). Retirement is also seen as a transition where workers have psychological pressure to continue or improve their well-being in old age (Kim and Moen, 2001). Inadequate retirement planning will lead to negative attitudes and dissatisfaction in retirement (Wöhrmann et al., 2014).

Women consistently show lower retirement readiness than men (Sabri et al., 2015). Women more often stop their careers from taking care of children and families, which causes them to more easily succumb to poverty in old age (Grohmann, 2016).

2.2 Financial Literacy

Financial literacy is the knowledge application about appropriate financial concepts to make effective and productive financial decisions (Atkinson & Messy, 2012). Financial literacy becomes significant when someone faces complex financial decisions such as retirement, savings, investment portfolio, and credit card awareness. Bucher-Koenen et al. (2017) show that increasing financial literacy is the key to helping women to prepare for pensions and increasing their financial security.

2.3 Financial Management Application

According to Wolmarans and Meintjes (2015), financial management is planning, directing, supervising, organizing, and controlling finances. According to Brown et al. (2005), the most vital aspect of personal financial management is financial planning which involves a dynamic process of periodic monitoring and re-evaluation. The main goal of financial management is to improve financial well-being for the present and the future.

2.4 Saving Behavior

According to Eriksson and Hermansson (2014), saving behavior is a framework of a person's ability and desire to save money. One of the reasons someone saves is to plan and prepare for the future. Someone will tend to be motivated to save a pension fund when they feel closer to retirement (Ekerdt et al., 2000).

Lusardi and Mitchell (2007) show that women generally have lower financial literacy than men, and financial literacy influences savings and portfolio choices.

2.5 Financial Knowledge

Financial knowledge is understanding financial concepts, products, and features (Bajaj & Kaur, 2021). Someone with sound financial knowledge can make good financial planning and decisions because individuals know how to manage their finances well and understand how financial institutions work (Mahdzan & Tabiani, 2013).

2.6 Financial Attitude

Mahapatra et al. (2017) define financial attitudes as an individual's financial ideology that leads to the creation and maintenance of values towards financial issues. General financial attitudes such as attitudes in managing cash, credit, and savings determine a person's level of financial well-being (Xiao et al., 2009). Previous research has proven that someone with an excellent financial attitude tends to have a positive attitude towards the future (Atkinson & Messy, 2012).

Hypothesis Development

a. The Effect of Financial Literacy on Retirement Readiness.

Brown and Graf's research (2013) proves that someone with good financial literacy is more likely to plan for retirement better because financial literacy helps individuals in the financial decision-making process, analyzes the opportunities offered, and the possible risks that can be posed by guiding them on the choices that best suit their financial needs (Potrich et al., 2018). It is supported by previous research, which found that financial literacy positively and significantly affects one's retirement readiness (Larisa et al., 2020; Sabri et al., 2015). Therefore, the first hypothesis proposed in this study is:

H1: Financial literacy positively affects the retirement readiness of female civil servants in the Waropen Regency.

b. The Effect of Financial Management Implementation on Retirement Readiness.

Previous research has proven that applying financial management positively relates to retirement readiness (Sabri et al., 2015). Someone who consistently applies financial management and retirement plans will tend to have a better level of retirement readiness (Sabri et al., 2015). Therefore, the second hypothesis proposed in this study is:

H2: The application of financial management positively affects the retirement readiness of female civil servants in the Waropen Regency.

c. The Effect of Saving Behavior on Retirement Readiness

After retirement, people lose their income and rely on accumulated savings to finance their lives (Sabri & Juen, 2014). Several researchers have proven that saving behavior positively influences retirement readiness (Kaur & Lehal, 2020; Sabri & Juen, 2014). Regular saving behavior will lead to better retirement readiness (J. Kim et al., 2005). Therefore, the third hypothesis proposed in this study is:

H3: Saving behavior positively affects the retirement readiness of female civil servants in the Waropen Regency.

d. Financial Knowledge Moderates the Effect of Financial Management Implementation on Retirement Readiness.

Financial knowledge positively influences personal financial management behavior. Qamar et al. (2016) prove that financial knowledge can mediate the relationship between financial attitudes and personal financial management behavior. Some researchers also prove that financial knowledge positively influences financial well-being (Hajam, 2020; Henager & Mauldin, 2015). Thus, the seventh hypothesis proposed is:

H4: Financial knowledge moderates the effect of implementing financial management on the retirement readiness of female civil servants in the Waropen Regency

e. Financial Attitude Moderates the Effect of Saving Behavior on Retirement Readiness.

A financial attitude is an individual's tendency to face problems or matters related to finance. Shim et al. (2012) found that actual savings and future-oriented financial behavior were positively related to financial well-being. Therefore, this study assumes that someone with good financial behavior and good saving behavior will result in higher retirement readiness. Thus, the fifth hypothesis proposed is:

H5: Financial attitudes moderate the effect of saving behavior on the retirement readiness of female civil servants in the Waropen Regency.

Referring to the theory, the previous researchers' findings and the hypotheses development, Figure 1 depicts the framework of this research.

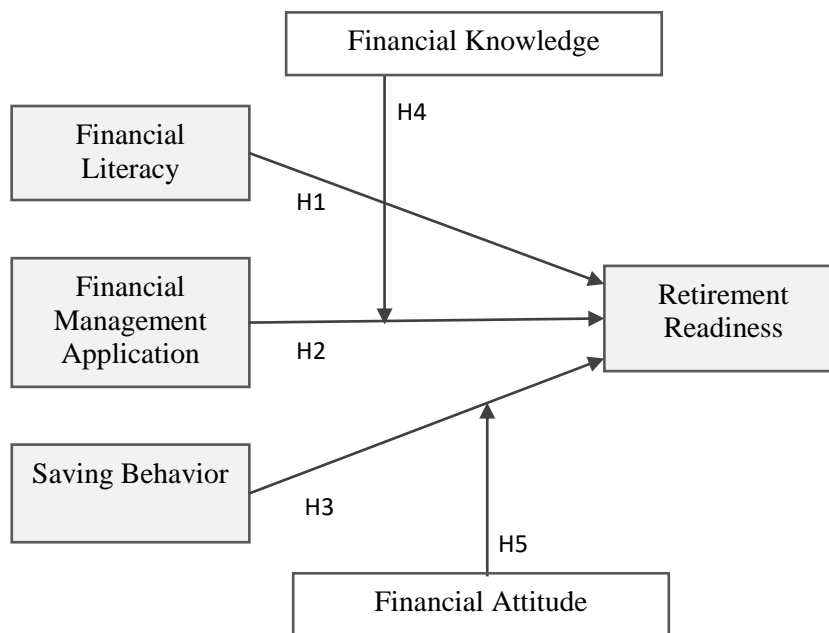


Figure 1. Research Model

III. Research Method

This research is quantitative research with a causality analysis approach. The population in this study were all female civil servants in Waropen Regency, Papua. Based on data from BPS Papua, the number of female civil servants in the Waropen Regency in 2020 is 939. Samples were taken using non probability sampling methods. 300 out of 939 female civil servants are chosen for research samples.

The research instrument in this study is questionnaires. This study uses indicators or variable measurements developed by previous researchers. Table 1 shows the number and sources of indicators in detail. All indicator variables were assessed using a 5-item Likert scale ranging from 1-strongly disagree to 5-strongly agree.

Data analysis methods in this research are descriptive and parametric statistical analysis. Parametric analysis determines the effect of the independent variable with the dependent variable. The Structural Equation Modeling Partial Least Square (SEM-PLS) approach tests the causality of the variables.

Table 1. Variable names, number of indicators, and adopted research

No	Variables	Number of Indicators	Source
1	Financial Literacy	9	Hira and Loibl (2005); Dogra <i>et al.</i> (2021)
2	Financial Management Application	12	Parrotta and Johnson (1998)
3	Saving Behavior	10	Thung <i>et al.</i> (2012)
4	Financial Knowledge	5	Bapat (2020)
5	Financial Attitude	10	Parrotta and Johnson (1998)
6	Retirement Readiness	10	Sabri and Juen (2014); Kim <i>et al.</i> (2005)

Source: Processed data (2022)

IV. Result and Discussion

Researchers distributed questionnaires to 300 female civil servants in Waropen Regency, but only 286 questionnaires were returned and used to test and analyze research hypotheses. Based on the analysis results of the characteristics of the respondents, Table 2 shows that the majority of respondents are in the range of 30-39 years old (50.70%), married (86.71%), having a bachelor's degree (53.85%), working 6-10 years (33.22%), and third class of civil servants (56.64%).

Table 2. Demographic Characteristics of Respondents

Characteristics	Alternative Answer	Frequency	Percentage (%)
Age	20-29 years old	21	7,34%
	30-39 years old	145	50,70%
	40-49 years old	97	33,92%
	> 50 years old	23	8,04%
Marital Status	Married	248	86,71%
	Unmerried	38	13,29%
Education	Senior High School	77	26,92%
	Diploma 3	46	16,08%
	Bachelor Degre (S1)	154	53,85%
	Master Degre (S2)	9	3,15%
Period of Service	Doctoral Degre (S3)	0	0,00%
	1-5 years	58	20,28%
	6-10 years	95	33,22%
	11-15 years	82	28,67%
	16-20 years	27	9,44%
	21-25 years	14	4,90%
Group of Civil Servant	> 25 years	10	3,50%
	Group I	0	0,00%
	Group II	112	39,16%
	Group III	162	56,64%
	Group IV	12	4,20%

Source: Processed data (2022)

4.1 Outer Model Analysis

The outer model test ensures that the measurement used is feasible as a measurement (valid and reliable). Construct validity testing, or testing the instrument's ability to measure what should be measured, in PLS is carried out through convergent validity, discriminant validity, and reliability tests.

Convergent validity is assessed based on the correlation between the item score and the construct score or factor loading. The analysis of the factor loading values in Table 3 shows 12 items that are invalid and must be eliminated from the research model because they have a low factor loading value. At the construct level, all variables have an AVE value > 0.5 , which indicates good convergent validity.

Furthermore, the composite reliability (CR) and Cronbach's alpha (CA) values were evaluated to measure the reliability of the measurement model. The data in Table 3 shows that the CA value of all variables ranges from 0.801-0.892 > 0.60 and the CR value ranges from 0.857-0.912 > 0.70 . Thus, it concludes that all variables meet the reliability criteria.

Table 3. Factor Loading and Reliability Coefficients

Variable	Items	Loading	AVE	CA	CR	
Financial Literacy	LK1	I have clear thoughts about my financial needs in retirement	0,676	0,501	0,801	0,857
	LK2	Compared to six months ago, now I have a better understanding of how to invest money.	Invalid			
	LK3	Compared to six months ago, now I know more about how to prepare for my finances in the future.	Invalid			
	LK4	Compared to six months ago, now I have a better understanding of how to manage my credit.	Invalid			
	LK5	I believe that pre-existing conditions are covered by Health insurance.	0,707			
	LK6	I realize that a mutual fund is a diversified pool of investment funds suitable for investment.	0,713			
	LK7	I feel that insurance gives me protection and also a return on investment	0,646			
	LK8	I believe that reading about the best investment options helps me to invest with the	0,791			

		best future offers				
	LK9	I feel that financial literacy helps me live a financially secure life	0,706			
Application of Financial Management	PPK1	I follow the weekly or monthly budget that I have made	0,721	0,514	0,892	0,912
	PPK2	I sometimes receive overdue notifications for late or missed payments (R)	Invalid			
	PPK3	I review and evaluate my spending habits	0,789			
	PPK4	I pay my debts on schedule	0,639			
	PPK5	I often spend much money, more than I have (R)	0,583			
	PPK6	I put myself in more debt every year (R)	0,657			
	PPK7	Every year, I contribute to my retirement savings.	0,570			
	PPK8	I regularly set aside money for possible unexpected expenses.	0,797			
	PPK9	I adequately insure my personal property (such as house, furniture, or other personal belongings)	Invalid			
	PPK10	I make a plan on how to achieve my financial goals	0,771			
	PPK11	I set specific financial goals for the future.	0,812			
	PPK12	I regularly save money for savings.	0,779			
Saving Behavior	PM1	I save regularly for the future.	0,746	0,522	0,868	0,897
	PM2	In order to save, I often compare prices before purchasing.	0,689			
	PM3	To save, I do not consider my real needs before I buy (R)	Invalid			
	PM4	To save, I always follow my monthly budget carefully.	0,647			

	PM5	I do not have emergency cash (R).	Invalid				
	PM6	In order to save, I plan to reduce my expenses.	0,669				
	PM7	I save to achieve specific goals.	0,814				
	PM8	I will save until the end of my working life.	0,739				
	PM9	I try to save a small amount monthly.	0,777				
	PM10	Monthly savings help me to buy something big.	0,685				
Financial Knowledge	PK1	I know about the interest rates charged by banks or financial institutions.	0,801	0,576	0,814	0,871	
	PK2	I know about the credit score or rating made by the bank company and why it is done.	0,838				
	PK3	I know about the basics of personal financial management.	0,608				
	PK4	I know about investment details.	0,795				
	PK5	I clearly understand the details of my bank statement.	0,733				
Financial Attitude	SK1	I need to develop a regular saving pattern and stick to it.	0,721	0,542	0,856	0,891	
	SK2	Keeping track of financial matters is time-consuming to worry about (R).	Invalid				
	SK3	Each individual must be responsible for financial well-being.	0,737				
	SK4	Saving does not matter (R).	0,791				
	SK5	As long as I can meet the monthly payments, I do not have to worry about the length of time it will take to pay off the unpaid debt (R).	Invalid				
	SK6	I have to focus on the present when managing finances (R).	Invalid				

	SK7	Financial planning for retirement is not needed to ensure one's security in pension age (R).	0,730			
	SK8	Having a financial plan complicates making financial investment decisions (R).	0,554			
	SK9	Money spending planning is crucial to successfully managing life	0,779			
	SK10	Planning for the future is the best way forward	0,811			
Retirement Readiness	KP1	I have enough money to live comfortably during my retirement.	0,809	0,530	0,870	0,899
	KP2	I have enough money to pay my basic expenses during retirement.	0,719			
	KP3	I have enough money to pay for medical expenses in my retirement years.	0,840			
	KP4	I am confident that I am ready to retire.	Invalid			
	KP5	I can pay off debt when I retire.	0,569			
	KP6	I have enough money to pay for long-term care, such as care or health care, which is necessary to live comfortably during retirement.	0,720			
	KP7	I know how to determine how much money I need to live comfortably during my retirement years.	0,691			
	KP8	I have enough money for activities, for example, traveling.	0,656			
	KP9	I believe I have prepared financially for retirement.	0,783			
	KP10	I sure do not outlive my retirement savings.	Invalid			

Source: Processed data (2022)

Discriminant validity is evaluated by looking at the heterotrait-monotrait correlation ratio (HTMT) (Henseler et al., 2015). Table 4 shows that all HTMT values <0.90 have met the discriminant validity criteria.

Table 4. Heterotrait-Monotrait Ratio (HTMT)

Retirement Readiness	Financial Literacy	Financial Management Application	Saving Behaviour	Financial Knowledge	Financial Attitude
Retirement Readiness					
Financial Literacy	0,738				
Financial Management Application	0,702	0,577			
Saving Behavior	0,813	0,604	0,654		
Financial Knowledge	0,746	0,611	0,614	0,579	
Financial Attitude	0,740	0,608	0,602	0,643	0,572

Source: Processed data (2022)

4.2 Inner Model Analysis

Table 5 shows that the R-Square value of the retirement readiness variable is 0.687, which means that the variables of financial literacy, application of financial management, saving behavior, financial knowledge, and financial attitudes explain retirement readiness by 68.7%. Meanwhile, the remaining 31.3% is explained by other variables not examined in the model. The R-square value of 0.687 is included in the substantial category.

Furthermore, the Q-square value measures how well the observed values are produced by the research model and its parameter estimation. Table 5 shows that the Q-square value is 0.355 and is included in the moderate predictive relevance.

Table 5. Coefficient of Determination Value and Predictive Relevance

	<i>R-Square</i>	<i>R-Square Adjusted</i>	<i>Q-Square</i>
Retirement Readiness	0,687	0,682	0,355

Source: Processed data (2022)

Hypothesis testing is carried out to determine the effect of one variable on other variables by looking at the parameter coefficients and t-statistical values (Ghozali & Latan, 2015). Based on the data in Table 6, all hypotheses show a positive path coefficient, t-statistic > 1.66, and significance < 0.05. Thus, all null hypotheses (Ho1, Ho2, Ho3) are rejected, which means a positive influence on financial literacy, the application of financial management, and saving behavior on retirement readiness.

Table 6. Results of Direct Effect Hypothesis Testing

Hypothesis				<i>Path Coeff.</i>	T-statistik	<i>P-values</i>	Results
H1	Financial Literacy	→	0,194	4,602	0,000	Ho rejected	
	Retirement Readiness						
H2	Financial Management	→	0,114	2,222	0,027	Ho rejected	
	Application						
	Retirement Readiness						
H3	Saving Behavior	→ Retirement	0,326	7,093	0,000	Ho rejected	
	Readiness						

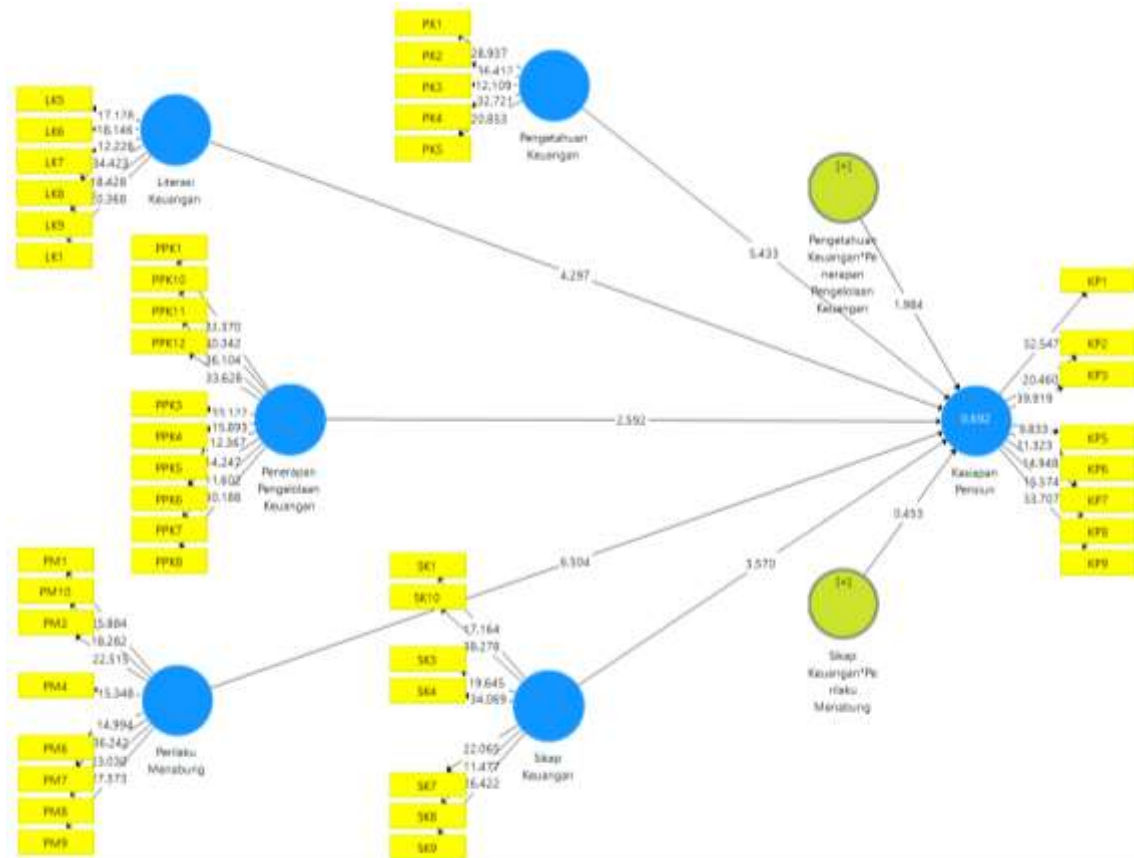
Source: Processed data (2022)

Financial literacy positively and significantly affects retirement readiness. These results support previous research such as Larisa et al. (2020). Although the financial literacy of female civil servants in the Waropen Regency is considered good, several things need to be improved, such as financial knowledge about mutual funds as an investment and insurance. The limited knowledge of respondents regarding investment and mutual funds is suspected to be caused by the limited infrastructure in Waropen Regency. It indicates that disadvantaged areas such as Waropen Regency, where access to information and communication technology (ICT) infrastructure and financial facilities is still limited, have limited public financial literacy for financial products and services.

Financial management proves a positive and significant effect on retirement readiness. These results are in line with previous studies such as Sabri et al. (2015). Sound financial management practices enable people to control their financial situation and create financial security (S. Joo, 2008). Female civil servants in Waropen Regency have been able to control their financial situation by not increasing their debt to better prepare for their finances in retirement. Female civil servants in Waropen Regency have also set specific financial goals for the future and set aside money for savings.

Although the implementation of the financial management of female civil servants in Waropen Regency is exemplary, they are still not good in terms of financial management for insurance and paying bills on time. It is caused by a lack of knowledge of insurance products and benefits. Female civil servants in Waropen Regency only know about insurance managed by the government. In addition, the limited access and willingness of insurance companies in Waropen Regency is also the cause of the lack of knowledge and financial management of female civil servants about insurance.

Furthermore, saving behavior proves a positive and significant effect on retirement readiness. These results support previous researchers such as Kaur and Lehal (2020) and Sabri and Juen (2014). The better the saving behavior of female civil servants in the Waropen Regency, the better the retirement readiness. The other two independent variables show that saving behavior significantly influences retirement readiness because saving is closely related to retirement readiness. After retirement, people lose their primary source of income and, therefore, they rely on accumulated savings to live (Sabri & Juen, 2014). Female civil servants in Waropen Regency save to achieve specific goals, save regularly for the future, and reduce expenses.



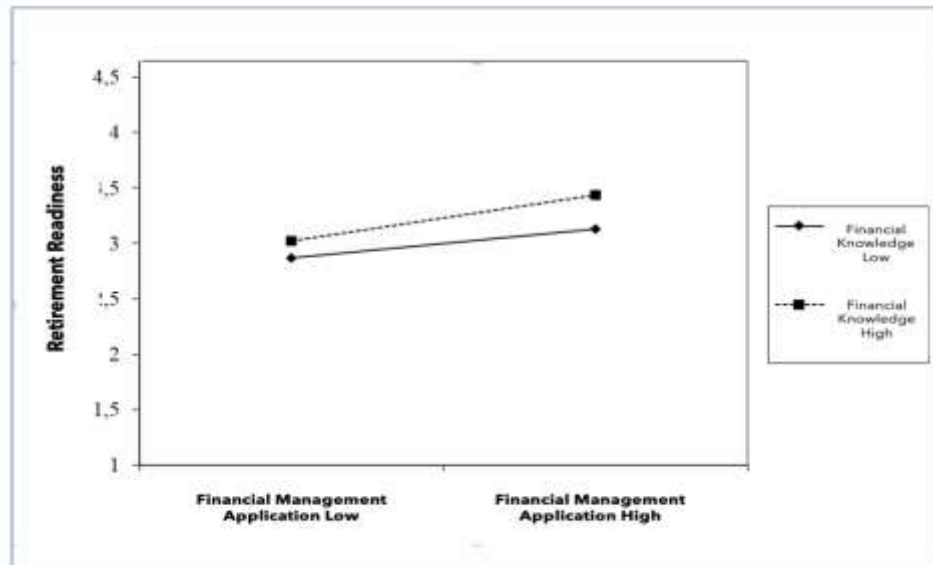
Source: Processed data (2022)
Figure 2. Moderation Test Results

Moderation hypothesis testing is conducted by adding a moderating construct or interaction between financial knowledge x the application of financial management and the interaction construct between financial attitudes x saving behavior, as shown in Figure 2. As with testing the direct effect, acceptance or rejection of the moderation hypothesis is also evaluated based on the t-statistics value and p-value of the moderating construct on retirement readiness. (Ho not Rejected)

Table 7. Moderation Hypothesis Test Results

Hypothesis	Path Coeff.	T-statistik	P-values	Results
H4 Financial Knowledge * Financial Management Application → Retirement Readiness	0,073	1,984	0,048	Ho Rejected
H5 Financial Attitude* Saving Behavior → Retirement Readiness	-0,018	0,453	0,651	Ho not Rejected

Source: Processed data (2022)



Source: Processed data (2022)

Figure 3. Financial Knowledge Moderation Interaction

The results of the moderation hypothesis test in Table 7 conclude that only financial knowledge is significant in moderating the effect of implementing financial management and retirement readiness. Meanwhile, financial attitudes are not proven to moderate the effect of saving behavior on retirement readiness. The interaction of financial knowledge moderation on the relationship between financial knowledge and retirement readiness was then analyzed further using the simple slope graph shown in Figure 3.

If it involves the financial knowledge variable, the effect of implementing financial management on retirement readiness may differ based on the level of financial knowledge possessed by the employee. If employees have limited financial knowledge, the effect of implementing financial management on retirement readiness will be lower. On the other hand, if employees have adequate financial knowledge, implementing financial management on retirement readiness will be more substantial.

It means that the financial knowledge variable can moderate the relationship between financial management application and retirement readiness. Implementing financial management on retirement readiness will be more substantial at a high level of financial knowledge. These results support the research of Mohidin et al. (2013), which states that adding the financial knowledge variable can show differences in the effect of financial planning attitudes on retirement readiness based on their financial knowledge level.

This study provides novelty by examining financial knowledge as a moderating relationship between applying financial management and retirement readiness. With high financial knowledge, female civil servants in Waropen Regency will enable them to manage their finances well, leading to better retirement readiness. On the other hand, female civil servants with a lower level of financial knowledge have poor financial management, so the effect of financial management on retirement readiness is more minor.

Financial knowledge possessed by individuals will enable them to apply proper and effective financial management. This study is in line with Henager and Mauldin (2015), who found that financial knowledge positively affects financial management, such as saving, which ultimately results in positive financial well-being.

The hypothesis testing results cannot prove that financial attitudes moderate the relationship between saving behavior and retirement readiness. The good or bad financial attitude of female civil servants in Waropen Regency does not affect the relationship between saving behavior and retirement readiness. These results do not support Topa et al. (2018), which recommend examining a person's financial attitude concerning the effect of the desire to save on retirement financial planning.

The descriptive analysis of respondents' answers shows that female civil servants in Waropen Regency have good financial attitudes. However, they focus on the present in managing finances. This attitude may cause financial attitudes to be unable to moderate the relationship between saving behavior and retirement readiness. When someone saves and has future-oriented financial behavior, it will positively affect his/her financial well-being (Shim et al., 2012).

IV. Conclusion

The analysis results of this study prove that financial literacy, financial management application, and saving behavior positively and significantly impact the retirement readiness of female civil servants in the Waropen Regency. Better financial literacy, management, and saving behavior will lead to higher retirement readiness. This study also proves that financial knowledge can moderate the effect of implementing financial management on retirement readiness.

This study provides significant implications for public sector organizations to improve female civil servants' retirement readiness in the poorest and disadvantaged areas. The government, leaders, and management of public sector organizations in Waropen Regency can provide training, guidance, and programs that help improve financial literacy, implementation of financial management, saving behavior, financial knowledge, and financial attitudes, so that female civil servants have better preparation when facing retirement. The training, mentoring, and programs can be related to managing mutual funds, investment, insurance, money and time management to pay bills, prioritizing needs in buying goods, implementing monthly budgets, bank loans, and future-oriented financial management.

For further researchers, this research can be re-examined by expanding the scope and sample of the research. In addition, further researchers can also use male civil servants as a sample so that a multigroup analysis can be carried out that will show and explain whether there are significant differences in the financial readiness of women and men in the public sector. Researchers can also use mixed research methods to explain in depth the factors of civil servant retirement readiness based on the results of interviews.

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