



Analysis of health investment decisions: the moderating effects of health values and perceived environmental uncertainty

Kusroh Lailiyah¹, Sitta Saraya², Lukman Zaini Abdullah³, Nanang Apriliyanto⁴

^{1,2}Faculty of Law, Selamat Sri University, Indonesia

^{3,4}Faculty of Economics and Business, Selamat Sri University, Indonesia

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ABSTRACT

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The COVID-19 pandemic has officially ended, yet many individuals continue to struggle with achieving health independence. This is evident from the ongoing complaints regarding the inability to pay monthly contributions to the National Health Insurance (JKN), despite an overall increase in JKN enrollment compared to the pre-pandemic period. One of the main barriers to health independence appears to be the lack of public understanding regarding health investment, which is the core issue and central focus of this study. This condition may be influenced by various financial factors, particularly in terms of financial attitude and financial knowledge. This study aims to analyze the influence of financial attitude and financial knowledge on health investment decisions, with health value and perceived environmental uncertainty serving as moderating variables. A quantitative approach was employed, with primary data collected from 200 respondents who decided to invest in their health after experiencing serious health issues during the COVID-19 pandemic. The data were analyzed using SmartPLS. The findings reveal that financial attitude plays a significant role in encouraging individuals to make health investment decisions. This effect becomes stronger and more positive in situations of high environmental uncertainty. However, when viewed through the lens of strong personal health values, this relationship turns significantly negative. Conversely, although financial knowledge has the potential to support health investment decisions, its influence is not consistently evident. When moderated by health value and perceived environmental uncertainty, financial knowledge does not appear to have a significant impact on health investment decisions. Increasing JKN participation requires a combination of developing positive financial attitudes, improving financial literacy, strengthening public trust, and aligning communications with public health values and priorities.

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Corresponding Author:

Kusroh Lailiyah,
Faculty Of Law,
Selamat Sri University,
Jalan Soekarno Hatta KM.03, Kendal, Jawa Tengah, Indonesia.
Email: hepilia190@gmail.com

1. INTRODUCTION

Although the COVID-19 pandemic has officially ended, the global community continues to be haunted by the circumstances experienced during the crisis, particularly in terms of physical and mental health conditions. This reality underscores that health is a fundamental and essential need for the sustainability of human life. A relatively good health status is universally desired by all individuals, prompting them to make continuous efforts to maintain their physical and mental well-being (Fuady et al., 2024). One such effort includes health investment activities and the consumption of various health-related goods and services (Aurelya et al., 2022; Kuvaja-Köllner et al., 2023).

However, despite its importance, health investment practices remain rare among the Indonesian population, especially during the pre-pandemic era (Santoso, 2020). Referring to Presidential Regulation of the Republic of Indonesia No. 82 of 2018, the government has sought to support citizens by providing an accessible and affordable health investment scheme through the National Health Insurance (JKN) program (Kemkes.go.id, 2022).

Before the pandemic, JKN had recorded a total of 196.66 million registered participants. However, in the aftermath of the pandemic, there was a significant increase in enrollment by approximately 36.6% reaching a total of 262.74 million participants (Anggraini, 2023; Katadata.co.id, 2018). This increase in JKN participation should reflect a growing awareness among Indonesians of the importance of health investment (Asante et al., 2023). Nonetheless, it raises the question of why health investment only began to be viewed as a basic necessity after the pandemic and was not considered a priority in earlier periods.

Moreover, despite the JKN program being designed to be highly affordable, many individuals still report difficulties in making monthly premium payments. This phenomenon suggests that health independence has not yet been fully established among Indonesian citizens (Maulana et al., 2022; Rokx et al., 2009). As such, the decision to invest in health becomes a crucial initial step in building individual health independence.

Health investment decisions can be defined as rational actions taken by individuals when faced with urgent needs requiring protection (Damayanti & Fauzi, 2020). For example, purchasing health insurance is a form of health investment aimed at minimizing the financial risks associated with unexpected health issues (Damayanti & Fauzi, 2020).

Several factors can influence health investment decisions, two of which are financial attitude and financial knowledge. Financial attitude refers to an individual's mindset, opinions, and evaluations regarding their personal finances, which shape their behavior and decision-making (Damayanti & Fauzi, 2020; Sapiri & Awaluddin, 2023). According to the theory of planned behavior, attitude influences behavioral intention, which in turn predicts actual behavior (Ajzen & Driver, 1992; Sartika, 2020). Therefore, financial attitude plays a central role in determining one's decision to invest in health. Previous studies have confirmed that financial attitude has a positive and significant impact on investment decisions (Ardhiani & Panjaitan, 2023; Damayanti & Fauzi, 2020; Meissner et al., 2023; Sapiri & Awaluddin, 2023).

Another important factor is financial knowledge, which refers to an individual's ability to manage economic information, formulate financial plans, and make better decisions regarding wealth accumulation (Atmaningrum et al., 2021). Financial literacy not only enables individuals to use money wisely but also contributes to sustainable economic benefits for themselves and their families (Gunawan et al., 2021; Katnic et al., 2024). Previous research has consistently shown that financial knowledge has a positive and significant influence on investment decisions, including health-related investments (Ardhiani & Panjaitan, 2023; Atmaningrum et al., 2021; Damayanti & Fauzi, 2020; Mubaraq et al., 2021).

Nonetheless, inconsistencies remain in prior studies regarding the effects of financial attitude and financial knowledge on health investment decisions. Furthermore, in the post-pandemic era, health has emerged as a priority need, even surpassing other basic necessities, especially in today's environment which is highly susceptible to the spread of various diseases (Marlinae et al., 2021; Sapiri & Awaluddin, 2023).

To address these gaps, this study adopts a comprehensive approach by incorporating Health Value and Perceived Environmental Uncertainty as moderating variables. Health Value refers to the perception that health should be viewed as a holistic entity comprising physical, mental, and social dimensions, all of which are integral components of a complete understanding of health (Damayanti & Fauzi, 2020). Health Value also reflects the personal meaning and emotional connection individuals have toward their own health (Gamage et al., 2021; Lee & Zarowsky, 2015).

Meanwhile, Perceived Environmental Uncertainty is defined as a situation in which individuals are unable to accurately predict future events or changes. This concept illustrates the extent to which the external environment is seen as unpredictable, unstable, and difficult to control (Franke et al., 2022; Kong & Zeng, 2023; Waldman et al., 2001). Under conditions of high uncertainty, individuals often struggle to anticipate the potential success or failure of the decisions they make (Grupe & Nitschke, 2013; Peters et al., 2017).

Based on the above problems, the research question posed in this study is: How do individuals perceive health investment as an essential and independent basic need in a disease-prone environment such as the current era. The objective of this research is to analyze the influence of financial attitude and financial knowledge on health investment decisions, with Health Value and Perceived Environmental Uncertainty acting as moderating variables. The findings of this study are expected to provide a clearer picture and serve as a recommendation for the public to foster greater trust and commitment in engaging with health investment programs in the future.

2. RESEARCH METHOD

This study is a quantitative research that explains the relationship between one variable and another (Ghanad, 2023). The data used in this research were obtained primary data obtained primarily from respondents through a Google Form, using a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) (Sugiyono, 2022). The population targeted in this research consists of individuals who decided to invest in their health after experiencing health deterioration during the COVID-19 pandemic. The characteristics of the respondents taken were those aged over 17 years old, showing a JKN card and having an Indonesian ID card. The sample was selected using an incidental sampling method, resulting in 200 respondents. This sample size was derived from the number of indicators 20 multiplied by the recommended factor of 10 (Hair et al., 2021).

The variables included in this study are financial attitude, financial knowledge, health investment decisions, health values, and perceived environmental uncertainty. The indicators for financial attitude are self-confidence, self-development, and a sense of security (Handayati et al., 2023; Sapiri & Awaluddin, 2023). Indicators for financial knowledge include knowledge of financial concepts, the ability to communicate financial concepts, financial management skills, decision-making ability regarding finances, and confidence in financial planning (Adiputra et al., 2021; Sapiri & Awaluddin, 2023). Health investment decisions are measured by indicators such as the time taken to decide on health investments, consultation before making investment decisions, and allocating income for health purposes (Damayanti & Fauzi, 2020). The indicators for health values include awareness of health, the importance placed on health, consideration of health in daily life, attention to healthy food choices, and concern over the consequences of health neglect (Damayanti & Fauzi, 2020; Tudoran et al., 2009). Lastly, perceived environmental

uncertainty is measured through indicators such as dynamism, risk, rapid development, and a high degree of tension (Firmansyah & Artanti, 2022; Kong & Zeng, 2023).

This research was analyzed statistically using SmartPLS. Partial Least Squares (PLS) is considered the most suitable technique for prediction-oriented or exploratory modeling research (Memon et al., 2021). PLS is a multivariate statistical analysis method that allows testing with multiple variables (Musyaffi et al., 2022). Furthermore, SmartPLS is more flexible, suitable for theory development, prediction, non-normal data, and small sample sizes. The analysis in this study consisted of three stages: the Outer Model test, the Inner Model test, and Hypothesis Testing (Latan, 2017). The Outer Model was used to assess the validity and reliability of the research instruments through convergent validity, discriminant validity, and composite reliability tests (Memon et al., 2021). The Inner Model was used to assess the structural model's feasibility by evaluating the R-Square (R^2) values (Memon et al., 2021). Hypothesis testing was conducted using multivariate statistics through SmartPLS, employing the Estimation of Path Coefficients and T-Statistics approach (Memon et al., 2021).

3. RESULTS AND DISCUSSIONS

3.1 Outer Model

In the outer model testing, several assessments are conducted to identify the validity and reliability of the data. These tests include convergent validity, discriminant validity, and reliability analysis. According to Memon et al. (2021), the criterion for establishing convergent validity is that each indicator of a variable must exhibit a loading value greater than 0.70. The following are the results of the convergent validity test in this study.

Table 1. Convergent Validity

Variable	Indicator	Loading
Financial Attitude	FAT1	0.851
	FAT2	0.856
	FAT3	0.840
Financial Knowledge	FKN1	0.896
	FKN2	0.844
	FKN3	0.885
	FKN4	0.893
	FKN5	0.730
Health Investment Decisions	HID1	0.912
	HID2	0.923
	HID3	0.702
Health Values	HVA1	0.880
	HVA2	0.937
	HVA3	0.897
	HVA4	0.873
	HVA5	0.938
Perceived Environmental Uncertainty	PEU1	0.906
	PEU2	0.803
	PEU3	0.903
	PEU4	0.898

Source: Analysis of primary data (2025)

The results of the above test indicate that all indicator values for each variable financial attitude, financial knowledge, health investment decisions, health values, and perceived environmental uncertainty meet the validity criteria, as all loading values exceed 0.70.

The next step involves evaluating the data based on discriminant validity. In this study, discriminant validity is assessed through two indicators: cross-loading values and the Average Variance Extracted (AVE) (Memon et al., 2021). Cross-loading refers to the extent to which each indicator loads more strongly on its associated construct than on

any other construct in the model (Memon et al., 2021). In other words, an indicator should have the highest loading on the variable it is intended to measure. The following are the cross-loading results obtained in this study.

Table 2. Discriminant Validity based on Cross-loading

Variable	Indicator	Financial Attitude	Financial Knowledge	Health Investment Decisions	Health Values	Perceived Environmental Uncertainty
Financial Attitude	FAT1	0.851	0.012	0.443	0.355	0.359
	FAT2	0.856	-0.005	0.457	0.385	0.455
	FAT3	0.840	0.076	0.437	0.350	0.449
Financial Knowledge	FKN1	0.054	0.896	0.165	0.110	-0.004
	FKN2	-0.001	0.844	0.141	0.065	-0.031
	FKN3	0.042	0.885	0.153	0.062	-0.063
	FKN4	0.062	0.893	0.193	0.134	-0.003
	FKN5	-0.076	0.730	0.088	0.063	-0.087
Health Investment Decisions	HID1	0.476	0.151	0.912	0.671	0.401
	HID2	0.456	0.205	0.923	0.678	0.414
	HID3	0.408	0.096	0.702	0.513	0.382
Health Values	HVA1	0.428	0.049	0.679	0.880	0.422
	HVA2	0.388	0.141	0.677	0.937	0.349
	HVA3	0.319	0.082	0.619	0.897	0.307
	HVA4	0.415	0.061	0.668	0.873	0.420
	HVA5	0.384	0.147	0.676	0.938	0.349
Perceived Environmental Uncertainty	PEU1	0.473	-0.002	0.422	0.373	0.906
	PEU2	0.407	-0.087	0.397	0.346	0.803
	PEU3	0.467	-0.009	0.409	0.361	0.903
	PEU4	0.395	-0.440	0.414	0.357	0.898

Source: Analysis of primary data (2025)

The cross-loading test results indicate that all indicators within each variable have the highest loading values compared to indicators of other variables in this study, thereby confirming their validity. Meanwhile, the Average Variance Extracted (AVE) must meet the criterion of having a value greater than 0.50 to be considered valid (Memon et al., 2021). The AVE results for this study are presented as follows.

Table 3. Discriminant Validity based on AVE

Variable	AVE
Financial Attitude	0.721
Financial Knowledge	0.726
Health Investment Decisions	0.725
Health Values	0.820
Perceived Environmental Uncertainty	0.772

Source: Analysis of primary data (2025)

The AVE test results for each variable financial attitude, financial knowledge, health investment decisions, health values, and perceived environmental uncertainty demonstrate that all variables meet the validity criteria, as their AVE values are above the threshold of 0.50.

The next step is the reliability test, which is assessed using both Composite Reliability and Cronbach's Alpha values. A construct is considered reliable if the Composite Reliability value is greater than 0.70 and the Cronbach's Alpha value exceeds 0.60 (Memon et al., 2021).

Table 4. Reliability based on Composite Reliability and Cronbach's Alpha

Variable	Composite Reliability	Cronbach's Alpha
Financial Attitude	0.886	0.806
Financial Knowledge	0.929	0.907
Health Investment Decisions	0.886	0.803

Health Values	0.958	0.945
Perceived Environmental Uncertainty	0.931	0.900

Source: Analysis of primary data (2025)

The Composite Reliability and Cronbach's Alpha values for each variable financial attitude, financial knowledge, health investment decisions, health values, and perceived environmental uncertainty indicate that all constructs meet the reliability criteria. Specifically, the Composite Reliability values for all variables exceed 0.70, and the Cronbach's Alpha values are all above 0.60, thus confirming the internal consistency of the measurement model.

3.2 Inner Model

The inner model assessment aims to evaluate the feasibility of the structural model by examining the R-Square (R^2) value. This value reflects the degree of variance in the endogenous variables that can be explained by the exogenous variables. In interpreting R^2 , a value of 0.67 or higher indicates a substantial level of explanatory power, a value around 0.33 suggests a moderate level, while a value near 0.19 is interpreted as weak explanatory strength (Chin, 2010).

Table 5. R-Square

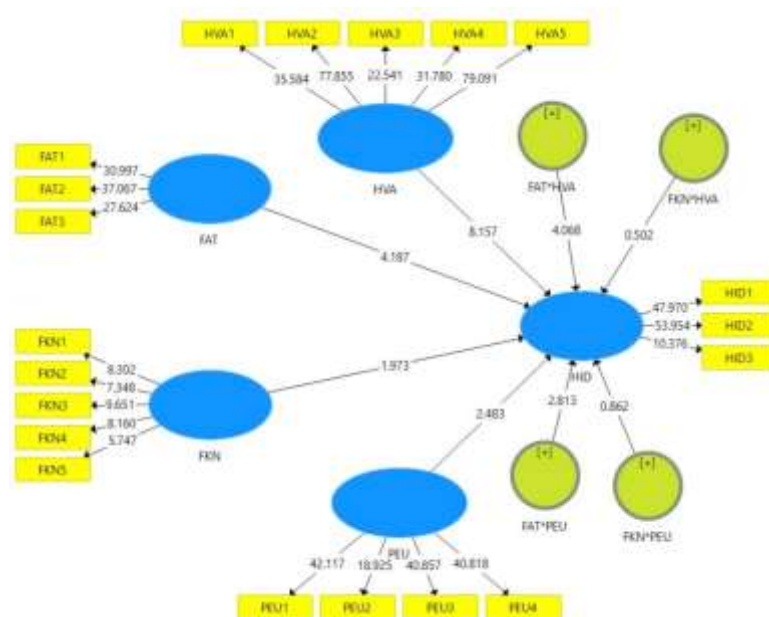
Variable Dependent	R-Square
Health Investment Decisions	0.676

Source: Analysis of primary data (2025)

The R-square value for the Health Investment Decisions variable is 0.676, indicating that the exogenous constructs in this model exhibit substantial explanatory power, as per commonly accepted thresholds. This suggests that financial attitude and financial knowledge collectively explain 67.6% of the variance in Health Investment Decisions, while the remaining 32.4% is attributable to other exogenous factors not incorporated in the current model.

3.3 Hypothesis Testing

Hypothesis testing was performed using multivariate statistical techniques via SmartPLS, employing the path coefficient analysis combined with T-statistics. According to Memon et al. (2021), a hypothesis is deemed to be supported when the original sample estimate yields a positive value. Moreover, the result is considered statistically significant if the p-value is below 0.05 and the T-statistic exceeds 1.96. On the other hand, if the p-value exceeds 0.05 and the T-statistic is lower than 1.96, the hypothesis is considered not supported or rejected (Memon et al., 2021).



Source: Analysis of primary data (2025)

Figure 1. Hypothesis Testing

Table 6. Hypothesis Testing

Hypotesis	Original Sample	T-Statistic	P-Values
FAT→HID	0.196	4.187	0.000
FKN→HID	0.094	1.973	0.049
FAT*HVA→HID	-0.222	4.068	0.000
FAT*PEU→HID	0.118	2.813	0.005
FKN*HVA→HID	0.023	0.502	0.616
FKN*PEU→HID	0.051	0.862	0.389

Note:

- FAT :Financial Attitude
- FKN :Financial Knowledge
- HID :Health Investment Decision
- HVA :Health Values
- PEU :Perceived Environmental Uncertainty
- FAT*HVA :Financial Attitude Moderated By Health Values
- FAT*PEU :Financial Attitude Moderated By Perceived Environmental Uncertainty
- FKN*HVA :Financial Knowledge Moderated By Health Values
- FKN*PEU :Financial Knowledge Moderated By Perceived Environmental Uncertainty

Source: Analysis of primary data (2025)

The results of the hypothesis test show that the relationship between financial attitude and Health Investment Decisions has a positive direction. This is shown in the original sample results with a value of 0.196. In addition, the relationship also shows a significant figure because it has a p-value of 0.000 and the t-statistic shows a value of 4.187. Meanwhile, the results of the hypothesis test show that the relationship between financial knowledge has a positive direction towards Health Investment Decisions. This is shown in the original sample results with a value of 0.094. In addition, the relationship also shows a significant figure because it has a p-value of 0.049 and the t-statistic shows a value of 1.973. The results of the hypothesis test show that the relationship between financial attitude and health values moderation has a negative direction towards Health Investment Decisions. This is shown in the original sample results with a value of -0.222. However, the relationship shows a significant figure because it has a p-value of 0.000 and the t-statistic shows a value of 4.068. Furthermore, the results of the hypothesis test show that the relationship between financial attitude and perceived environmental uncertainty moderation has a positive direction towards Health Investment Decisions. This is shown in the original sample results with a value of 0.118. In addition, the

relationship also shows a significant figure because it has a p-value of 0.005 and the t-statistic shows a value of 2.813. The results of the hypothesis test show that the relationship between financial knowledge and health values moderation has a positive direction towards Health Investment Decisions. This is shown in the original sample results with a value of 0.118. However, this relationship shows an insignificant figure because it has a p-value of 0.616 and the t-statistic shows a value of 0.502. Furthermore, the results of the hypothesis test show that the relationship between financial knowledge and the moderation of perceived environmental uncertainty has a positive direction towards Health Investment Decisions. This is shown in the original sample results with a value of 0.051. However, this relationship shows an insignificant figure because it has a p-value of 0.862 and the t-statistic shows a value of 0.389.

3.4 Financial Attitude on Health Investment Decision

Following the COVID-19 pandemic, financial attitude has demonstrated a positive and significant influence on health investment decisions, particularly in the context of participation in Indonesia's National Health Insurance (JKN) program. The heightened experience of health vulnerability during the pandemic has increased individuals' awareness of the critical importance of protecting their well-being through planned financial behavior. Individuals with a strong financial attitude tend to be more prudent, future-oriented, and capable of allocating resources for essential needs such as healthcare. This includes setting aside income for regular JKN premium payments and other health-related expenditures. The shift in public perception viewing health not merely as a basic necessity but as a long-term investment has reinforced the relevance of financial planning in sustaining health security. Thus, a positive financial attitude contributes significantly to proactive and responsible health investment behavior in the post-pandemic era. The results of this study reinforce the previous findings by Ardhiani & Panjaitan (2023); Damayanti & Fauzi (2020); Meissner et al. (2023); Sapiri & Awaluddin (2023).

3.5 Financial Knowledge on Health Investment Decision

In the post-pandemic period, financial knowledge has shown a positive and significant influence on health investment decisions, particularly regarding participation in Indonesia's National Health Insurance (JKN) program. Financial knowledge enables individuals to comprehend and apply financial concepts such as budgeting, saving, risk management, and the long-term benefits of insurance, which are crucial when facing health-related financial risks. The COVID-19 crisis heightened public awareness of health vulnerabilities and the economic burden of illness, prompting a shift in perception that health is not merely a basic need but a critical form of human capital requiring strategic financial planning. Individuals with higher financial literacy are more capable of evaluating the costs and benefits of health investments, understanding how insurance mechanisms work, and making informed choices about allocating resources toward sustainable health protection such as paying JKN premiums. They tend to perceive JKN not as a passive obligation, but as a proactive and rational step in minimizing future health expenditure risks. Furthermore, financial knowledge increases individuals' confidence and motivation to engage in health-oriented financial behaviors, reinforcing the idea that preventive investment in health leads to long-term economic and non-economic returns. Therefore, the significant relationship between financial knowledge and health investment decisions reflects not only individual awareness but also a broader societal need to strengthen financial literacy as a foundation for public health resilience and national insurance sustainability in the post-COVID-19 context. The results of this study reinforce the previous findings by Ardhiani & Panjaitan (2023); Atmaningrum et al. (2021); Damayanti & Fauzi (2020); Mubaraq et al. (2021).

3.6 Financial Attitude with Health Value as a Moderator on Health Investment Decisions

In the post-pandemic context, the interaction between financial attitude and health value has demonstrated a negative and significant influence on health investment decisions, particularly concerning participation in the National Health Insurance (JKN) program. While individuals with strong financial attitudes are generally expected to make responsible and forward-looking decisions, those who also place high intrinsic value on health may experience internal conflict when evaluating the costs and perceived benefits of formal health investments. People with a strong financial attitude emphasizing resource management, wealth accumulation, and long-term financial stability may not prioritize health investment due to a perceived conflict between their financial goals and the expenses associated with healthcare and a healthy lifestyle. Their focus on financial control and cost-efficiency can lead them to view healthcare spending, including JKN contributions, more as a consumption cost than as an investment in long-term well-being. Furthermore, when moderated by a strong health value orientation, such individuals may prefer more direct, personal, or alternative forms of health maintenance (e.g., fitness routines, organic food, or private care) over public insurance systems, which they may perceive as less flexible or effective. This suggests that, rather than reinforcing the decision to invest in formal health systems like JKN, the combination of strong financial attitude and high health value may, under certain circumstances, reduce one's likelihood to participate highlighting a tension between financial conservatism and perceptions of health-related spending in the post-pandemic era. This result represents a novelty, as there have been no prior studies referencing or addressing the findings of this research.

3.7 Financial Attitude with Perceived Environmental Uncertainty as a Moderator on Health Investment Decision

In the aftermath of the COVID-19 pandemic, the interaction between financial attitude and perceived environmental uncertainty has shown a positive and significant effect on health investment decisions, particularly in relation to participation in the National Health Insurance (JKN) program. Individuals with a strong financial attitude tend to plan, manage, and allocate resources prudently, and when this is coupled with a heightened perception of environmental uncertainty such as concerns about future health crises, economic instability, or limited healthcare access they are more likely to engage in protective financial behavior, including investing in health insurance. Perceived environmental uncertainty amplifies the perceived risk of not having adequate health coverage in the face of unpredictable threats, making individuals more aware of the long-term consequences of health neglect. As uncertainty increases, people with sound financial attitudes are more inclined to seek financial security and stability through formal mechanisms like JKN, which offer a structured and relatively affordable form of health protection. In this way, perceived environmental uncertainty acts as a psychological catalyst that strengthens the impact of financial attitude on health-related decisions, motivating individuals to view health expenditure not as a cost, but as a necessary investment in resilience against future shocks. This result represents a novelty, as there have been no prior studies referencing or addressing the findings of this research.

3.8 Financial Knowledge with Health Value as a Moderator on Health Investment Decisions

In the post-pandemic era, the interaction between financial knowledge and health value has been found to have no significant effect on health investment decisions, particularly regarding participation in Indonesia's National Health Insurance (JKN) program. Although financial knowledge enables individuals to understand the benefits of insurance, assess healthcare costs, and make rational financial choices, its impact may be limited when moderated by strong personal health values. Individuals who place a

high value on health may prioritize direct and immediate forms of health maintenance such as diet, exercise, supplements, or private care over formal insurance mechanisms like JKN, which are often perceived as impersonal, bureaucratic, or limited in flexibility. In this context, even financially literate individuals may not translate their knowledge into formal health investments if their health values emphasize autonomy, prevention, or personalized care over collective systems. Moreover, post-pandemic experiences may have shaped a belief that institutional health coverage is insufficient to meet personal health goals, causing those with high health value to seek more controllable alternatives. As a result, health value may neutralize or redirect the effect of financial knowledge away from structured programs like JKN, leading to insignificant behavioral outcomes. This suggests that financial knowledge alone is not a strong driver of health investment decisions when individual health priorities are misaligned with the perceived value or function of public insurance schemes. This result represents a novelty, as there have been no prior studies referencing or addressing the findings of this research.

3.9 Financial Knowledge with Perceived Environmental Uncertainty as a Moderator on Health Investment Decision

In the post-pandemic period, the interaction between financial knowledge and perceived environmental uncertainty has shown no significant impact on health investment decisions, particularly in relation to participation in the National Health Insurance (JKN) program. Although financial knowledge enhances an individual's capacity to understand financial products, assess risks, and make informed decisions, its influence may be weakened under conditions of high environmental uncertainty. When individuals perceive their environment as unstable due to economic volatility, unpredictable health threats, or institutional inefficiencies they may become more risk-averse, skeptical, or indecisive, regardless of their level of financial literacy. In such contexts, the ability to process financial information does not necessarily translate into action, as psychological responses such as fear, distrust, and ambiguity aversion tend to dominate rational evaluation. Furthermore, financially knowledgeable individuals may become overly critical of government health programs like JKN, especially if they perceive a lack of transparency, inefficiency, or limited benefits. This critical stance, combined with environmental uncertainty, may lead them to delay or avoid engaging in formal health investment mechanisms, opting instead for informal or individualized strategies. Thus, the moderating role of perceived environmental uncertainty may dilute or disrupt the positive influence of financial knowledge on health investment behavior, indicating that knowledge alone is insufficient to motivate action when individuals feel uncertain or distrustful of external conditions. This finding highlights the importance of addressing not only financial literacy but also public trust, policy transparency, and institutional credibility in encouraging health investment participation during uncertain times. This result represents a novelty, as there have been no prior studies referencing or addressing the findings of this research.

4. CONCLUSION

This study confirms that financial attitude plays a crucial role in shaping individuals' decisions to invest in health, particularly through participation in Indonesia's National Health Insurance (JKN) program. Individuals with a positive financial attitude marked by careful planning, future orientation, and responsible financial behavior are more likely to prioritize health-related expenditures. This influence becomes even more pronounced in the face of heightened environmental uncertainty, such as during the post-pandemic period, where perceived risks and instability motivate individuals to secure their well-being through structured financial mechanisms like health insurance. On the other hand, while financial knowledge holds the potential to support informed health

investment decisions, its influence is not always consistent. When personal health values are high or when environmental uncertainty is perceived to be overwhelming, financial knowledge does not necessarily lead to active investment behavior. In such cases, individuals may prefer more direct, alternative approaches to health maintenance rather than relying on formal systems like JKN. This suggests that psychological factors, environmental perceptions, and individual values toward health significantly shape how financial attitudes and knowledge translate into actual health investment decisions. To strengthen public participation in national health protection programs like JKN, a more comprehensive and context-sensitive approach is required. First, there needs to be a stronger emphasis on cultivating positive financial attitudes through educational efforts that promote long-term financial planning, particularly in relation to health needs. Public campaigns should not only highlight the financial benefits of health insurance but also reinforce the idea that maintaining health is a critical and worthwhile long-term investment. Second, efforts to enhance financial literacy should be complemented by measures to improve public perception and trust in the national health system. In times of environmental uncertainty, individuals are more likely to act cautiously. Ensuring transparency, improving service quality, and demonstrating the effectiveness of programs like JKN will help reduce skepticism and foster greater engagement. Third, policy interventions should consider variations in individuals' health values and preferences. Tailoring communication strategies to align with diverse health priorities and lifestyle choices can make public health messages more relatable and persuasive. Over the long term, a synergistic approach that integrates financial literacy, trust in public institutions, and appreciation for health as a vital asset will be essential to support the sustainability and effectiveness of national health investment initiatives.

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