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Customers' Perceptions, Trust, and Financial Literacy: A Re-Examination of Medical Insurance Purchase Decision Amidst Price Restructuring

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ABSTRACT

Malaysia's insurance industry remains the vital backbone and a safeguard for many sectors, particularly healthcare. Medical insurance provides financial protection against the consequences of health risks. Due to medical cost inflation, a premium price hike is necessary to keep up with the rising cost. This study looks at the internal factors, particularly on the policyholders' part, that may affect the decision to purchase medical insurance. Data is collected through a questionnaire distributed to Malaysian adults. Using data collected from 404 respondents, the Multiple Linear Regression analysis is performed to analyze and examine the relationships between the five independent variables and medical insurance purchase decisions. The results show that all independent variables have a significant effect on the medical insurance purchase decision. In addition, age groups, marital status, as well as education level are found to have significant impact on the medical insurance purchase decision. This study provides some valuable insights, especially to insurance providers, on factors they should tackle, as well as implement unique strategies for different demographic profiles to support the purchase decision of medical insurance despite the unavoidable premium price hike.

1. Introduction

From 2013 to 2018, 437 articles assessed factors influencing the willingness to pay for or purchase medical insurance [47]. Despite extensive research on this topic, a financial literacy survey in Malaysia in October 2023 revealed that only 33% of participants had individual medical insurance, and 44% lacked any form of personal or company-issued medical insurance [49]. This reflects a reluctance to purchase medical insurance, even with growing awareness of its benefits, which is particularly problematic as Malaysia moves towards an aging society and faces economic inflation. The absence of sufficient medical coverage can significantly burden individuals and the healthcare system,

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especially when managing unexpected illnesses in old age [61]. Health insurance is essential for pooling risks and protecting individuals against financially disruptive medical bills due to sickness, accidents, or disability [24]. Despite government subsidies and public healthcare investment in Malaysia, healthcare expenditure continues to rise. According to Araullo [6], the insurance industry in Malaysia faces modest growth projections due to household debt and inflation, yet premiums and medical claims will likely continue to increase. The cost of medical care globally reached a historic high of 10.7% in 2023, with the trend expected to rise further due to the pandemic's delays and inflation [57]. The Ministry of Health Malaysia (MOH) allocated RM41.2 billion for healthcare in 2024, reflecting the growing financial strain [36].

In addition to rising healthcare costs, Malaysia's public healthcare system faces significant challenges, including a shortage of doctors and long wait times, especially for non-emergency consultations [25]. These issues contribute to increased burnout among medical professionals, which negatively affects the quality of care. With many patients opting for private healthcare to avoid lengthy wait times, the cost of private healthcare becomes a barrier for many. This is where medical insurance can play a crucial role by easing financial burdens and providing faster access to private hospitals, thus reducing reliance on overburdened public healthcare services. Despite rising healthcare costs, many Malaysians remain uninsured or underinsured as they do not fully understand the complexities of insurance, which discourages them from obtaining coverage [43]. Perceived high costs relative to benefits and lack of understanding are major barriers [53]. Moreover, lower-income individuals, who exhibit higher present bias and lower insurance uptake are particularly vulnerable [40].

Although global studies have examined factors influencing medical insurance uptake, empirical research specifically focused on Malaysia remains limited. There is a need to explore how financial literacy, perceived risk, perceived product benefits, perceived private healthcare quality, trust and demographic factors impact the decision to purchase medical insurance in Malaysia. This study aims to examine the relationship between these factors and the purchase of medical insurance, contributing to a deeper understanding of the barriers and motivators behind insurance decision-making in the country.

Based on previous discussions, this research mainly aims to study the relationship between five identified factors and the purchase of medical insurance:

i. To examine the relationship between independent variables and medical insurance purchase decisions.
   a. To examine the effect of financial literacy on medical insurance purchase decisions.
   b. To examine the effect of perceived risk on medical insurance purchase decisions.
   c. To examine the effect of perceived product benefit on medical insurance purchase decisions.
   d. To examine the effect of perceived private healthcare quality on medical insurance purchase decisions.
   e. To examine the effect of trust on medical insurance purchase decisions.

ii. To compare the effect of different demographic groups on medical insurance purchase decisions.
   a. To examine the effect of age groups on medical insurance purchase decisions.
   b. To examine the effect of marital status groups on medical insurance purchase decisions.
   c. To examine the effect of education level groups on medical insurance purchase decisions.

This research examines various variables that may impact medical insurance purchases to ensure financial security and provide a safety net against unexpected medical expenses. This study may be helpful for insurance companies in identifying the empirical reason people purchase medical insurance, developing products, and implementing marketing strategies to improve outreach and conversion rates.

2. Literature Review

2.1 Medical Insurance Purchase Decision

Health insurance is essential to sustainable and equitable development, providing financial protection against the cost of medical treatment and health services. Health insurance aims to improve health outcomes, yet research on these outcomes is still limited [17]. In Malaysia, medical insurance plans offer access to a network of hospitals, clinics, and healthcare professionals, ensuring the insured receive quality care at their preferred healthcare. Studies have shown that purchasing health insurance can significantly improve access to initial and preventive care, treatment of acute and traumatic conditions, and chronic illness management. Conversely, being uninsured is associated with adverse health outcomes [22]. Health insurance facilitates a fair redistribution of income from the healthy to the sick, suggesting that previous studies may have overestimated the efficiency costs of health insurance [35]. Moreover, purchasing health insurance is worthwhile because it includes particular policies that provide a lump sum payout after a diagnosis of a severe disease. McWilliams *et al*., [34] found a consistent positive effect of health insurance coverage on health, especially for acute or chronic conditions where effective treatment exists.

The most heavily insured elderly individuals use the most healthcare services, likely due to the incentives embodied in the insurance rather than adverse selection in insurance purchase [23]. Malaysia's insurance agencies have also effectively promoted private health insurance packages including life and general insurance schemes. Safurah *et al*., [44] reported that 54% of medical specialists were affiliated with private emergency clinics. Hence, health insurance can allow the insured to access many healthcare facilities and get treatment more quickly. This is supported by Woolhandler *et al*., [59], who stated in their study that lack of health insurance is linked to decreased survival rates and lower use of recommended preventive services, with evidence supporting the notion that insurance coverage reduces mortality. Therefore, this study intends to examine the significant impact of five independent variables on medical insurance purchase: financial literacy, perceived future risk, premium price, agent's persuasion, and perceived healthcare quality.

2.2 Perceived Product Benefits

Perceived benefit refers to an individual's understanding of the positive outcomes of a specific action [10]. Leong *et al*., [28] explain that individuals are less likely to purchase insurance products if they perceive the coverage as offering minimal or no benefit. Additionally, unexpected emotions experienced after the purchase may negatively impact their perception of the product's benefit. This is further supported by Qian [41], who stated that customers' concerns or hesitations about purchasing insurance products are influenced by the perceived benefits they associate with them. Zhao *et al*., [65] research indicates that a greater perceived benefit correlates with a stronger intention to purchase medical insurance. If consumers are satisfied with the benefits offered by the insurance provider, they are likely to remain a client of that trusted provider. As financial considerations remain a primary factor, monetary benefits and concerns about rising medical costs are key drivers of medical insurance purchase intentions [8]. Winarti *et al*., [58] demonstrate that

perceived benefit and trust significantly influence medical insurance purchases. Darwin and Gularso [14] emphasize that, among the various factors influencing insurance purchases, perceived benefit is the most significant predictor of attitudes toward life insurance. Thus, perceived benefit is critical in shaping consumers' decisions and attitudes toward insurance products.

2.3 Perceived Risk

According to Mishra *et al*., [37], consumers are strongly impacted by the perceived risks of acquiring insurance. People perceive risk when they face uncertainty and potentially undesirable consequences if the decisions do not match their expectations [29]. Perceived risk can be understood as a subjective expectation of unfavourable outcomes influenced by emotion and personal experience. Specifically, in life insurance, Qian [41] argues that risk perception is the primary driver of consumer purchases of insurance products. Ansari [5] found that catastrophe insurance is not purchased because individuals are ill-informed about the risks. However, studies show that the demand for such insurance increases after floods, including changes in people's insurance behaviour after the COVID-19 pandemic [45]. This study extrapolates that individuals' perceptions may change similarly after using compulsory insurance. This indicates that people will buy health insurance, which will serve as a mitigation tool to reduce the risks individuals face in the event of unexpected healthcare service costs. The significance of perceived risk in shaping consumer behavioural intention is well-documented, as it motivates individuals to conduct thorough research before purchasing health insurance [39]. In the study by Mishra *et al*., [37], perceived risk influences individuals' decisions when buying medical insurance. Hence, perceived risk plays a significant role in identifying consumer perception and intention toward medical insurance purchases, in line with research by Zhang and Yu [63].

2.4 Perceived Private Healthcare Quality

Perceived private healthcare quality plays a crucial role in influencing medical insurance purchases. Al-Neyadi [4] highlighted that patients prioritize healthcare quality, particularly staff competence, courtesy, and the ability to instill confidence. Private hospitals offer benefits such as shorter wait times, the ability to choose doctors, and improved service quality, which significantly enhance customer satisfaction [21]. Additionally, medical insurance reduces financial concerns, providing access to higher-quality and more comfortable hospital environments. Han and Nathen [20] further support this, showing that health insurance significantly influences consumer choices, as patients seek services that align with their healthcare needs. Costa and García [13] also discovered that the perceived quality difference between public and private healthcare drives the demand for private health insurance. Despite financial constraints, low-income groups are willing to pay more for better healthcare services [38]. Supporting this, Mamun *et al*., [33] found that individuals who perceive private healthcare as higher quality are more likely to see medical insurance as a crucial investment.

2.5 Financial Literacy

Financial literacy involves managing personal finances efficiently, including making informed decisions regarding investments, insurance, real estate, and retirement. It also includes understanding economic principles and concepts such as financial planning, compounding, debt management, effective saving techniques, and the time value of money. Research by Egon and

Klinton [16] identified a positive correlation between financial literacy and life insurance purchase intention. A study by Kubitza *et al*., [27] shows that financial illiteracy among customers significantly affects the outcome of the insurance market. It indicates that this knowledge helps people navigate their financial challenges and improve their overall financial well-being, which in turn enables them to understand and select insurance policies and coverage that suit their needs. In United States research, found that low financial literacy among Affordable Care Act (ACA) subsidy recipients may hinder informed health insurance decisions [9]. Several previous studies have also reported that financial literacy is closely related to an individual's demand for life insurance [30,32] and purchase intention toward Islamic life insurance [62]. Ajemunigbohun and Azeez [3] also found that financial knowledge plays a significant role in influencing the demand for life insurance.

2.6 Trust

Trust plays an essential role in insurance purchases by reducing perceived risk and shifting the focus from price to value and benefits of the policy [46]. Insurance contracts are based on the principle of utmost good faith, requiring both parties to disclose relevant information to one another. Mutual trust is crucial for initiating and maintaining an insurance agreement [54]. Research indicates that trust significantly influences decisions to purchase medical insurance. For instance, Van der Hulst *et al*., [51] found that consumers who trust an insurer are more open to receiving healthcare advice from that company, which boosts their comfort and confidence in their decisions. Dewi [15] explained that trust bridges consumer perceptions of insurers and their intent to purchase insurance, reducing doubts and perceived risks. Past studies have highlighted that customer trust is a key mediator in shaping attitudes toward insurance [7]. Moreover, trust in both the service provider and regulator significantly drives higher customer engagement, with all dimensions of trust positively impacting it. This supports the idea that trust facilitates initial purchases and fosters long-term relationships. Cardoso *et al*., [11] further emphasized that when consumers trust a brand, they are more likely to continue engaging with it over time, reinforcing the importance of trust in building lasting connections and reducing uncertainties about buying insurance.

In conclusion, this literature review highlights critical insights into the factors influencing health insurance purchase decisions. Health insurance is pivotal in providing financial security against medical expenses, enhancing access to essential healthcare services, and improving health outcomes. Demographic factors, financial literacy, perceived risk, perceived product benefit, perceived healthcare quality, and trust emerge as significant determinants shaping consumer behavior toward the decision of purchasing medical insurance. Understanding these factors is essential for policymakers and insurance providers, aiming to promote equitable access to healthcare and optimize insurance market dynamics. Future research should explore these variables in diverse socio-economic contexts to strengthen policy interventions and enhance consumer welfare in healthcare financing.

3. Data and Methodology

3.1 Conceptual Framework

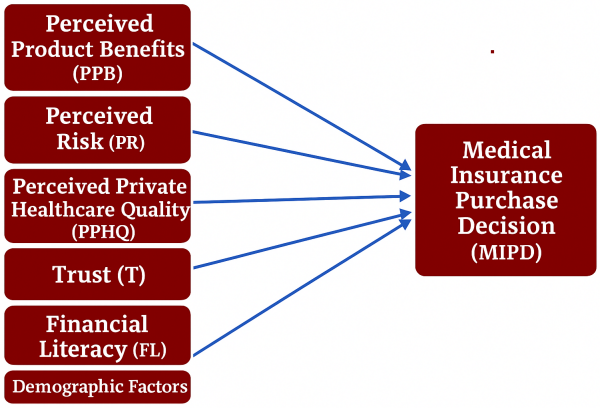

Fig. 1. Conceptual framework

Based on this conceptual framework and the discussions in the previous section, these research hypotheses are as follows:

H1: Perceived product benefit has significant impact on the medical insurance purchase decision
H2: Perceived risk has significant impact on the medical insurance purchase decision
H3: Perceived private healthcare quality has significant impact on the medical insurance purchase decision
H4: Financial literacy has significant impact on the medical insurance purchase decision
H5: Trust has significant impact on the medical insurance purchase decision
H6: Demographic profile groups have significant impact on the medical insurance purchase decision

3.2 Research Design

This study employs a cross-sectional design, collecting data through a random distribution of online questionnaires to Malaysian respondents who have purchased medical insurance. The questionnaire consists of sections covering demographic details and factors influencing medical insurance purchase decisions, with items measured on a 5-point Likert scale. Statistical analyses include multiple linear regression (MLR), Kruskal-Wallis, and Mann-Whitney U tests, along with correlation and multicollinearity assessments and reliability tests to examine relationships between financial literacy, perceived risk, product and healthcare benefits, trust, and medical insurance decisions.

Furthermore, this study targets a representative sample rather than the entire population to ensure reliable findings. Working adults residing in Malaysia are selected as the target population, as they are more likely to prioritize health protection and purchase medical insurance. According to Yeow *et al.*, [60], young adults aged 18–25 are particularly influenced by attitudes, perceived behavioral control, and financial benefits in purchasing health insurance, making individuals as young as 18 eligible for this study.

$$sample\ size = \frac{\frac{z^2 \times \sigma(1-\sigma)}{e^2}}{1+\frac{z^2 \times p(1-\sigma)}{e^2 N}} \qquad (1)$$

Where;
N = Population size z = z-score
e = margin of error
σ = standard deviation

The sample size for the study is calculated at a confidence level of 95% and a precision of 1% is denoted by Z=1.96; p = 0.5 (maximal variability assumed; actual proportion variability is unknown); q=0.5; and e=0.05. Using the formula in (1), the sample size is 384.15. This study aims for a minimum of between 384 to 385 responses. This calculation is based on the population of 16.689 million working adults in Malaysia [12]. Following the guidance of Survey Monkey (2018), larger samples tend to yield more precise outcomes. Machin *et al.*, [31] explain that sample size rules of thumb can refer to a single number recommended for all situations, such as the commonly used number "30". A pilot study with 30–50 participants ensures the reliability and validity of the questionnaire, assessed using Cronbach's. Hence, a smaller subset of 30 respondents from various backgrounds was considered for the pilot test.

3.3 Reliability Test

This research applies Cronbach's alpha method as the most commonly used test for evaluating internal consistency. This pilot study is important for ensuring that the research questions align with the study's objectives and that respondents can understand. Based on the findings' summary in each variable, all values of Cronbach's Alpha shown in Table 1 were acceptable, ranging between 0.932 and 0.970, which was greater than 0.7. As such, all items in the questionnaire would be used for further data collection as shown in Table 1.

Table 1
Reliability test

Variable	No of Item	Cronbach's Alpha	Reliability
Medical Insurance Purchase Decision	5	0.939	High
Financial Literacy	6	0.932	High
Perceived Risk	6	0.952	High
Perceived Product Benefit	5	0.799	High
Perceived Private Healthcare Quality	5	0.933	High
Trust	5	0.970	High

3.4 Normality Test

Table 2 shows the skewness and kurtosis values for each scale used in this study. The skewness values for all variables were less than +1.00 or -1.00, and the kurtosis values were all less than +3.00 or -3.00. These results suggest that the data distribution for each scale is approximately normal.

Table 2
Normality test results

Variable	Skewness	Kurtosis
Medical Insurance Purchase Decision	-1.206	1.242
Financial Literacy	-1.110	1.195
Perceived Risk	-0.459	-0.783
Perceived Product Benefit	-0.872	0.462
Perceived Private Healthcare Quality	-0.986	0.629
Trust	-1.017	1.154

3.5 Regression Analysis

This study will perform a regression analysis to determine the factors influencing medical insurance purchases in Malaysia. Regression analysis can indicate the strength and significance of the association between independent and dependent variables.

$$Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_3 + \beta_4 x_4 + \beta_5 x_5 \quad (2)$$

β_0 = Intercept
β_1 = Coefficient for Financial Literacy
β_2 = Coefficient for Perceived Risk
β_3 = Coefficient for Perceived Product Benefit
β_4 = Coefficient for Perceived Private Healthcare Benefit
β_5 = Coefficient for Trust
x_1 = Financial Literacy
x_2 = Perceived Risk
x_3 = Perceived Product Benefit
x_4 = Perceived Private Healthcare Benefit
x_5 = Trust
ε = Error Term

4. Results and Discussion

4.1 Demographic Profiles

A summary of the demographic characteristics of 404 participants is provided in Table 2. The following is a breakdown of the demographic profile of the respondents. Table 3 presents the demographic profile of respondents based on gender and age. The majority of respondents were female, accounting for 240 individuals (59.4%), compared to 164 males (40.6%). In terms of age distribution, 17.8% of the respondents were aged between 18 and 25 years, while 36.6% were between 26 and 35 years. A further 25.2% fell within the 36 to 45 age group, and 16.6% were aged between 46 and 55 years. Respondents aged 56 to 65 years made up 3.5% of the sample, while only 0.2% were above 65 years. The majority of respondents were married, accounting for 256 individuals (63.4%). This was followed by unmarried respondents, who comprised 133 individuals (32.9%). A small proportion of the sample, 15 respondents (3.7%), reported being divorced.

Table 3
Demographic profiles

Measure	Item	Frequency	Percentage (%)
Gender	Female	240	59.4
	Male	164	40.6
	Total	**404**	**100**
Age	18 – 25 years	72	17.8
	26 – 35 years	148	36.6
	36 – 45 years	102	25.2
	46 – 55 years	67	16.6
	56 – 65 years	14	3.5
	>65 years	1	0.2
	Total	**404**	**100**
Marital Status	Divorce	15	3.7
	Married	256	63.4
	Unmarried	133	32.9
	Total	**404**	**100**
Income Range	< RM 2500	91	22.5
	RM 2501 – RM 4849	150	37.1
	RM 4850 – RM 7099	100	24.8
	RM 7110 – RM 10959	46	11.4
	RM 10961 – RM 15039	8	2.0
	>RM 15040	9	22.5
	Total	**404**	**100**
Race	Malay	293	72.3
	Chinese	63	15.6
	India	48	11.9
	Total	404	100
Education	High School	41	10.1
	Diploma	67	16.6
	Bachelor's Degree	240	59.4
	Master's Degree	36	8.9
	PhD	11	2.7
	Professional Certification	7	1.7
	Other	2	0.4
	Total	**404**	**100**
Employment Status	Government Employee	139	34.4
	Private Employee	144	35.6
	Self-Employed	44	10.9
	Unemployed	59	14.6
	Retired	18	45
	Total	**404**	**100**
Do you have any chronic disease	No	353	87.4
	Yes	51	12.6
	Total	**404**	**100**
Type of Insurance	Conventional	163	40.3
	Islamic	241	59.7
	Total	**404**	**100**

With regards to the income group, the respondents were categorized into three income groups based on Malaysia's income classification: B40 (Bottom 40%), M40 (Middle 40%), and T20 (Top 20%). The B40 group included respondents earning less than RM2500 (22.5%) and those earning between RM2501 and RM4849 (37.1%). This group constituted a total of 241 individuals, representing 59.6%

of the sample. The M40 group comprised respondents with incomes ranging from RM4850 to RM7099 (24.8%) and RM7110 to RM10959 (11.4%), making up 146 individuals or 36.2% of the sample. The T20 group, consisting of respondents with incomes between RM10961 and RM15039 (2.0%) or greater than RM15040 (22.5%), accounted for 17 individuals, representing only 24.5% of the sample.

The majority of respondents were Malay, with 293 individuals, accounting for 72.3% of the total respondents. The Chinese group comprised 63 respondents, representing 15.6%, while the Indian group consisted of 48 respondents, making up 11.9% of the overall sample. Table 2 shows the respondents' profile based on their highest education level. The majority of the respondents, with 240 individuals or 59.4%, hold a Bachelor's Degree. A significant 67 individuals, or 16.6%, have a Diploma, followed by 41 High School graduates, who account for 10.1%. Master's Degree holders make up 8.9% of the sample, with 36 respondents, and PhD holders represent 2.7%, with 11 respondents. A smaller group with 7 individuals or 1.7%, possess a Professional Certification, while 2 respondents or 0.4%, fall under the Other category (alternative qualifications not specified in the provided categories).

Among the respondents, 34.4% were employed as government employees, while the majority were private employees, with 35.6 % or 144 individuals. This was followed by self-employed individuals, who accounted for 10.9% or 44 respondents. 14.6% or 59 individuals were unemployed. A smaller proportion of retired group were contributed by 4.5% or 18 individuals.

Table 3 show the majority of respondents reported having a chronic disease, with 51 individuals, or 12.6% of the sample, indicating that they have one or more chronic conditions. 353 respondents, or 87.4%, reported not having a chronic disease. Among those with chronic diseases, conditions such as asthma, heart disease, hypertension, chronic sinusitis, diabetes, arrhythmia, gout, minor stroke, slipped disc, cancer, Chronic Obstructive Pulmonary Disease (COPD), chronic kidney disease (CKD), Neuromyelitis Optica Spectrum Disorder (NMOSD), and Guillain-Barré Syndrome (GBS) were identified. Table 2 also shows that 40.3% of respondents have conventional insurance, while a majority, 59.7%, have Islamic insurance.

4.2 Multicollinearity Test

Table 4
Multicollinearity test results

Variable	VIF
Medical Insurance Purchase Decision	2.075
Financial Literacy	1.218
Perceived Risk	1.810
Perceived Private Healthcare Quality	2.579
Trust	2.075

Table 4 shows the Variance Inflation Factor (VIF) values for the variables in this study to assess the presence of multicollinearity. The ideal VIF value is significantly lower than 5.00, and it should never exceed 10.00. The VIF values for all the variables in the model are below 5.00, with Medical Insurance Purchase Decision and Trust both having a VIF of 2.075, Financial Literacy at 1.218, Perceived Risk at 1.810, Perceived Product Benefit at 2.361, and Perceived Private Healthcare Quality at 2.579. These results indicate that there is no multicollinearity issue in the data, as all the VIF values are within the acceptable range.

4.3 Multiple Linear Regression

According to Thalji [50], MLR is suitable for understanding the combined effect of multiple independent variables on a dependent variable. Hence, this makes it appropriate for the analysis. The objective of this study is to identify the factors that influence the decision when purchasing medical insurance. The independent variables considered for this study are Financial Literacy (FL), Perceived Risk (PR), Perceived Product Benefit (PPB), Perceived Private Healthcare Quality (PPHQ), and Trust (T). The following table displays the outcomes of the multiple regression analysis conducted in this study.

Table 5
Regression analysis results

Model	Standardized Beta	t-value	p-value	Decision
(Constant)	1.125	6.374	0.000	-
FL	0.399	7.810	0.000	Accepted
PR	-0.056	-2.080	0.038	Accepted
PPB	0.080	1.833	0.068	Accepted
PPHQ	0.187	3.256	0.001	Accepted
T	0.121	2.119	0.035	Accepted

Model	R Square	F	Sig.
Regression	0.462	68.224	0.000[b]

Dependent Variable: MIPD
Predictors: (Constant), Financial Literacy (FL), Perceived Risk (PR), Perceived Product Benefit (PPB), Perceived Private Healthcare Quality (PPHQ) and Trust (T)

By regressing the survey data from 404 respondents using SPSS, the results presented in Table 5 were obtained. This analysis was conducted to meet the research objective of identifying factors influencing medical insurance purchase decision. In this model, the values for each variable, initially measured on a Likert scale, were transformed into their mean values to meet the requirements of the regression process. The results show that all five independent variables – Financial Literacy (FL), Perceived Risk (PR), Perceived Product Benefit (PPB), Perceived Private Healthcare Quality (PPHQ), and Trust (T) - were statistically significant in this model, as each of their respective p-values was less than 0.10 and with some even below 0.05 (<0.000, 0.038, 0.068, 0.001, and 0.035 respectively). Therefore, it can be concluded that each of the $H\alpha$ hypotheses of the independent variables have been accepted.

The study found that financial literacy (β = 0.399, t = 7.810, p = 0.000), perceived risk (β = -0.056, t = - 2.080, p = 0.038), perceived product benefit (β = 0.080, t = 1.833, p = 0.068), perceived private healthcare quality (β = 0.187, t = 3.256, p = 0.001), and trust (β = 0.121, t = 2.119, p = 0.035) significantly influenced Malaysians' decisions to purchase medical insurance. The results suggest that financial literacy and trust positively impact purchase decisions, with financial literacy showing the strongest influence. Perceived risk also significantly affected the decision, but in a negative direction, meaning that higher perceived risk was associated with a lower likelihood of purchasing medical insurance. Perceived product benefit and perceived private healthcare quality positively influenced the decision, although the effect of perceived product benefit was weaker.

The equation derived from the multiple regression analysis shows a constant value of 1.125 suggesting that when all independent variables are at zero, the medical insurance purchase decision would be 1.125 units. Specifically, for each unit increase in financial literacy ($x1$), the purchase decision increases by 0.399 units, while for every unit increase in perceived risk ($x2$), the purchase decision decreases by 0.056 units. Similarly, an increase in perceived product benefit ($x3$) results in a 0.080 unit increase, while an increase in perceived private healthcare quality ($x4$) leads to a 0.187 unit increase in the purchase decision. Finally, an increase in trust ($x5$) corresponds to a 0.121 unit increase in the likelihood of purchasing medical insurance.

The result from Table 5 also shows that the model fits the data well. The independent variables in the model explain 46.2% of the variations in the dependent variable. The F- statistic is 68.224 and p-value of 0.00 suggests that the independent variables strongly influence the dependent variable as a group.

The hypothesis demonstrates that there is a positive and significant relationship between financial literacy and the medical insurance purchase decision. The MLR analysis revealed a p-value of 0.000, which is below the significance level of 0.10. Therefore, hypothesis ($H1$) is accepted. This result aligns with research conducted by Egon and Klinton [16], which found that financial literacy positively correlates with life insurance purchase intentions. Financial literacy refers to the capacity to comprehend and effectively apply financial skills, such as budgeting, personal financial management, and investing [48]. For instance, Mahdzan and Victorian [32] highlighted that individuals with greater financial knowledge are more likely to recognize the importance of life insurance as part of their financial planning. Similarly, Ajemunigbohun and Azeez [3] discovered that financial knowledge significantly impacts the demand for life insurance. These findings, along with prior research, suggest that individuals who understand the financial protection and healthcare access benefits of medical insurance are more likely to be influenced in their decision to purchase insurance. This highlighted the importance of enhancing public awareness and education on the value of medical insurance, particularly in ensuring financial security and access to essential healthcare services. Moreover, enhancing financial literacy through education significantly increases consumer confidence in making informed decisions about medical insurance products. Supporting this, research in the United States revealed that low levels of financial literacy were prevalent among individuals eligible for ACA subsidies, potentially hindering their ability to make informed decisions about purchasing health insurance [9].

Perceived risk was a significant determinant in the decision to purchase medical insurance. The p-value of 0.038 is less than the 0.10, indicating that perceived risk significantly impacts consumers' purchase decisions. This finding highlights that consumers' uncertainty about whether an insurance product will meet their expectations regarding coverage and benefits is valid and supported. This result aligns with the studies by Mishra *et al*., [37] and Zhang and Yu [63], which demonstrated that perceived risk significantly influences individuals' decisions when buying medical insurance. In this study, for every unit increase in perceived risk (x_2) will decreases the likelihood of purchasing medical insurance by 0.056 units. People are less willing to buy a product if they feel there is a higher risk, especially if they think it might not provide the coverage or benefits they need. In a similar manner, Nursiana *et al*., [39] found that perceived risk strongly affects consumer concerns, which in turn influence decisions to purchase life insurance. When perceived risk increases, consumers become more worried about negative outcomes, like the product not meeting their expectations. This worry makes them less likely to buy the insurance. These results show that perceived risk is an important factor in deciding whether to purchase medical insurance.

Perceived product benefit is a key factor influencing Malaysians' decisions to purchase medical insurance. The hypothesis in this study indicates that perceived product benefit significantly affects

this decision, with a p- value of 0.068, which is below the 0.10 threshold. People generally believe that medical insurance provides benefits when it aligns with their needs and expectations. Hence, the findings of this study demonstrate that perceived benefit and trust positively impact medical insurance purchase decisions, aligning with the results of Winarti *et al*., [58]. Gutierrez [19] similarly highlighted that individuals with commercial health insurance experience notable improvements in their personal health, emphasizing the importance of making well-informed decisions when selecting insurance products. Darwin and Gularso [14] note that, among factors such as financial literacy, perceived benefit, and demographics, perceived benefit emerges as the strongest. Moreover, Azizi *et al*., [8] identified monetary benefits and concerns over rising medical costs as critical drivers of medical insurance purchase intentions. This highlights the role of financial security in motivating consumers to protect themselves against unforeseen health-related expenses. The fear of health risks and high medical costs motivates consumers to purchase health insurance, as they seek the perceived benefits of financial protection. This study shows that individuals who view health threats as serious are more likely to purchase insurance, believing it will meet their needs. These findings align with Saraf and Baser's [45] research, which emphasized how the COVID-19 pandemic heightened risk awareness and influenced decisions on medical insurance products.

The hypothesis demonstrates a significant positive relationship between perceived private healthcare quality and medical insurance purchase decisions. The p-value was 0.001, which is lower than the significance level of 0.10. People believe that paying for insurance provides access to higher-quality care, which influences their decision to purchase insurance. This expectation stems from the belief that private hospitals offer more efficient services, making the cost of the insurance premium justifiable. Insurance holders expect fast, advanced treatment and a higher level of comfort in private hospitals, as they pay for insurance to reduce health risks when they fall ill. This study supports previous research, which shows that the perceived quality of healthcare services significantly impacts the decision to purchase medical insurance. These findings align with Han and Nathen's [20] and Al-Neyadi [4] studies. Additionally, Costa and García [13] found that the desire for private health insurance is influenced by the perceived quality gap between public and private healthcare. People who perceive private healthcare as offering better services than public options are more inclined to purchase insurance. This perception drives their preference for private health insurance, which they often associate with higher- quality care and better financial protection against unexpected medical expenses. Mamun *et al*., [33] similarly found that individuals who perceive private healthcare as offering higher quality are more likely to view medical insurance as an important investment to protect against future health-related financial challenges.

In this study, trust has a positive effect on medical insurance purchase decisions. The multiple linear regression analysis showed a p-value of 0.035, which is below the significance level of 0.10. This result supports the acceptance of hypotheses, indicating that trust significantly influences the decision to purchase medical insurance. This finding aligns with Van der Hulst *et al*., [51], who found that brand trust significantly impacts consumers' willingness to seek healthcare advice from their insurer. When consumers trust their insurer, they feel more secure in their decision-making, which increases their likelihood of purchasing a policy. Trust reduces the perceived risk associated with buying insurance and shifts consumers' focus from price to the value and benefits of the policy [46]. For example, people who trust their insurer view premiums as a fair trade- off for the peace of mind and financial security that the policy provides. This study also aligns with Dewi's [15] conclusion that trust plays a vital role in bridging consumer attitudes and intentions to purchase insurance by reducing uncertainties and building confidence. Similarly, Cardoso *et al*., [11] found that a trusted brand fosters strong consumer connections, reinforcing beneficial long-term habits and loyalty.

4.4 Demographic Group Comparisons

The Kruskal-Wallis test was used to explore the impact of age on medical insurance purchase decisions. The results revealed a significant difference across age groups (X^2 (5) = 11.078, p = 0.048). According to Aguiar- Díaz and Ruiz-Mallorquí [2], health insurance premiums generally increase with age, particularly between 60 and 65 years, as the likelihood of pre-existing or underlying health conditions rises. This indicates that age plays a role in influencing respondents to purchase medical insurance, especially at a younger age, before premiums become significantly higher. The older an individual, the greater the risk they pose to insurers, which leads to higher premiums based on their health risks. Post-hoc Mann-Whitney U tests revealed significant differences between the 26–35 age group and others. Specifically, individuals aged 26–35 had significantly higher mean ranks than those in the 36–45 (U = 4018.5, p = 0.025) and 46–55 (U = 671.5, p = 0.028) age groups. This suggests that individuals aged 26–35 are more likely to purchase medical insurance compared to older groups. The Multiple Linear Regression (MLR) analysis supports this, showing that financial literacy (β = 0.399, p = 0.000) plays a central role in insurance purchase decisions across all age groups. Those individuals aged 26–35, may possess higher levels of financial literacy which can enabling them to understand the importance of insurance and could lead to a higher likelihood of purchasing insurance.

Table 6
Kruskal-Wallis Test Results

Demographic Profile	Items	N	Test	Test Statistic	p-value	Item Group	Mean Rank	Test	Test statistic	p-value
Age	18 – 25	72	Kruskal-Wallis	11.078	0.048	26 - 35	114.35	Mann-Whitney U Tests	4018.5	0.025
	26 – 35	148				46 - 55	93.98			
	36 – 45	102				26 - 35	83.96		671.5	0.028
	46 - 55	67				56 - 65	55.46			
	56 – 65	14								
	>65	1								
Marital Status	Married	256	Kruskal-Wallis	11.160	0.004	Married	139.59	Mann-Whitney U Tests	1002	0.002
	Unmarried	133				Divorce	74.8			
	Divorced	15				Unmarried	77.45		604.5	0.0012
						Divorce	48.3			
Education	High School	41	Kruskal-Wallis	11.613	0.040	High School	112.56	Mann-Whitney U Tests	3754.0	0.014
	Diploma	67				Bachelor's Degree	145.86			
	Bachelor's Degree	240				Diploma	128.72		6346.0	0.008
	Master's Degree	36				Bachelor's Degree	161.06			
	PhD	11								
	Professional Certification	7								

A study by Kettlewell and Zhang [26] on age-based penalties in private health insurance uptake in Australia found that financial incentives significantly influence purchase decisions. They observed a sharp increase in insurance uptake at age 31, driven by a 2% premium surcharge for each year of delayed enrollment beyond that age. This highlights how financial incentives tied to age can encourage younger adults to secure insurance earlier. On the other hand, Walker [52] noted that rising premium costs might deter older adults, especially those on fixed incomes during retirement, from maintaining or purchasing insurance. For this group, affordability becomes a critical factor.

These studies emphasize the role of age-related factors, such as affordability and financial incentives, in shaping insurance purchase decisions.

The marital status of respondents also significantly influenced medical insurance purchase decisions ($X^2(2) = 11.160$, $p = 0.004$). Post-hoc Mann-Whitney U tests showed that married individuals had higher mean ranks (139.59) compared to unmarried ($U = 1002$, $p = 0.002$) and divorced ($U = 604.5$, $p = 0.0012$) individuals. This suggests that married individuals are more likely to purchase medical insurance. Rey-Ares *et al*., [42] found a similar relationship between marital status and life insurance demand, attributing it to the increased awareness of financial risks and healthcare costs that come with family responsibilities. Married individuals often seek health insurance to ensure their family's financial security in case of illness or injury. This observation aligns with the MLR analysis, where trust ($\beta = 0.121$, $p = 0.035$) emerged as a significant predictor of medical insurance purchases. Married individuals may place greater trust in insurers, as they view insurance as a reliable means of managing unforeseen health-related expenses. Trust in insurers reduces perceived risks, making it easier for married individuals to commit to a policy. Married couples often make joint financial decisions, which may lead to a more thorough evaluation of insurance options, further emphasizing trust as a crucial factor.

Education level was another significant factor in the decision to purchase medical insurance ($X^2(5) = 11.613$, $p = 0.040$). Post-hoc analysis revealed that individuals with a Bachelor's degree had higher mean ranks (161.06) compared to those with only high school education ($U = 6346.0$, $p = 0.008$) or a diploma ($U = 3754.0$, $p = 0.014$). This suggests that higher education levels, particularly a Bachelor's degree, are associated with a greater likelihood of purchasing medical insurance. This finding is consistent with previous studies, such as Abu Bakar *et al*., [1] and Mamun *et al*., [33], which concluded that higher education levels strongly influence health insurance uptake. The MLR results also highlight the role of perceived product benefit ($\beta = 0.080$, $p = 0.068$) in influencing insurance purchases. Individuals with higher education levels are more likely to understand the financial and healthcare benefits of insurance, which increases their perceived value of the product. Educated individuals tend to have greater awareness of the risks associated with inadequate health coverage and the importance of mitigating these risks through insurance. As Wilfred (2020) noted, higher educational attainment fosters a deeper understanding of health insurance benefits, leading to higher uptake rates.

5. Conclusions

The primary aim of this study was to assess the determinants of medical insurance purchase decisions in Malaysia. While having medical insurance is not mandatory for everyone, it plays a crucial role in protecting individuals' finances from unexpected health risks and provides access to high-quality healthcare. Universal health coverage seeks to ensure that all individuals can receive necessary medical care without facing financial strain due to high out-of-pocket expenses [18]. This research focuses on five variables: financial literacy (FL), perceived risk (PR), perceived product benefit (PPB), perceived private healthcare quality (PPHQ), and trust (T).

Hypothesis testing was conducted using a questionnaire completed by 404 respondents. The data was processed using SPSS software for analysis. After performing reliability and validity checks for the independent variables and evaluating the regression model's assumptions, the analysis proceeds to test the relationships between the variables. Each relationship between variables had p-value values indicating that the resulting influence is positive and statistically significant. In addition, the independent variables in the model explained 46.2% of the variation in the dependent variable.

Based on the results of the data analysis, it can be concluded that all five hypotheses in this study are supported.

The findings suggest that medical insurance purchase decisions are significantly influenced by all the independent variables. The results of the objective of the research indicate all five independent variables, including financial literacy (FL), perceived risk (PR), perceived product benefit (PPB), perceived private healthcare quality (PPHQ), and trust (T), exhibit statistical significance within the framework of this study. Theoretically, this study only includes internal factors to assess the factors that strongly affect medical insurance purchase decisions. Future research should explore the role of external factors in influencing these decisions, as these factors may also have a significant impact on future studies.

In terms of practical contributions, understanding these dynamics can offer useful insights into improving insurance purchase decisions. Policymakers can use these findings to fine-tune insurance recommendations, while governments and insurers can develop better strategies to meet people's needs. This makes medical insurance more accessible and better suited to the financial situations of different income groups. For example, microhealth insurance has proven to be an effective way to help low-income individuals cover healthcare costs [64]. At the same time, changing how people see the benefits of medical insurance requires efforts to improve system design, share information more effectively, build public policy awareness, and create a supportive healthcare environment [53].

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