
REVIEW ARTICLE

Systematic Review of Factors Influencing the Demand for Medical and Health Insurance in Malaysia

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ABSTRACT

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Introduction	Medical and health insurance provides financial protection against the consequences of the occurrences of health risks. Different perceptions have led to resistance to change, as well as the acceptance level from Malaysians. It is fundamental to study the reception and acceptance of all types of insurance schemes by Malaysians and to identify the knowledge and information pertaining to reception by Malaysians.
Methods	A systematic search was performed from six major search engines from 2013–2018 in searches of published articles on factors that influence the demand or willingness to pay for health insurance among Malaysians. There were nine articles included, in which personal factor was found to influence the most when demanding for health insurance.
Results	Higher education level, younger age group, and good knowledge were associated with higher demand for health insurance. Higher household monthly income and the cost to pay were among the positively significant economic determinant factors to demand for medical insurance.
Conclusions	Education and promotion are important to understand why such policies were introduced and how they intend to serve the public before implementing major policies. These elements capture the essence of ‘health promotion’, which is about enabling people to take control over their health and thereby, improving their health.
Keywords	Health insurance - Medical insurance - Willingness to pay - Demand.

INTRODUCTION

Insurance offers individual institutional units exposed to certain risks with financial protection against the consequences of the occurrence of specified event.¹ It is a measure of protection, at least financially, should a misfortune happens. There are many types of insurance schemes available, namely life insurance, medical/health insurance, automobile insurance, property insurance, and disability insurance. Medical and health insurance provides financial protection against health risks. This type of insurance protects against critical illness occurrences, hospitalisation and surgical income benefits, accident coverage, and other health risks.² Typically, insurance is voluntarily purchased by individuals, who pay different premiums depending on the type of health insurance and the level of coverage. From nearly 60% of Malaysians who seek private primary care, only 18.8% of adult Malaysians are protected with insurance, while the other 73.2% use out-of-pocket (OOP).³

National health financing scheme is a system of health insurance that insures a national population against the costs of healthcare. It is one of the activities of healthcare financing that raise and collect revenue to pay for the operation of a healthcare system. Some conventional categories of finance sources for healthcare are taxation, social health insurance, private health insurance, and OOP payments.⁴ The National Health Insurance (NHI) is one of the policy options to reduce the financial burden on the government with the aim to provide Universal Financial Risk Protection that is for Universal Health Coverage (UHC). This is the provision of, and access to, high-quality health services, and financial risk protection for people who need to use these services; thus making healthcare services more accessible, equitable, and affordable.⁵ Furthermore, NHI aims to reduce the need for OOP expenditure, thus overcoming the deterrent usage of healthcare services due to high OOP, which may lead to poor health outcomes and medical impoverishment.

Demographic and lifestyle shifts have steadily made Malaysia's population gain in life expectancy, thus becoming older (15% of Malaysians will be over the age of 60 by 2030)⁶ and less healthy, with increasing health burden of chronic illnesses and non-communicable diseases. Such changing health patterns require expensive and long-term treatment. Furthermore, dependency of the population towards government subsidies can further deprive the development necessity to the nation. The universal welfare-based system that has been implemented since independence has made the

public to heavily rely on the government. According to Sing Chew JitPoh⁷, Malaysian government has subsidised about 98% of the health services provided by the Ministry of Health (MOH) at all levels of primary, secondary, and tertiary healthcare services. Consequently, the sustainability of public-sector healthcare provision is questionable and whether it is time to emphasise on the public responsibility for their health and to lighten the burden of the nation's healthcare financing by increasing public participation and contribution in the national healthcare expenses.

Increased health risk poses the greatest threat to people's lives as it leads to direct OOP expenditures for medicine, transport, and treatment, as well as indirectly deteriorating labour supply and productivity. Some have declined the known risk, as they believe that the risk would not happen to them, although they clearly understand the risks. On the other hand, some people do not buy insurance because they are uninformed and are unaware of their future financial risk and lack of funds. Their willingness-to-pay by themselves or protection by voluntary private health insurance often reflects their perspective on insurance. Different perceptions lead to resistance to change, as well as the acceptance level among Malaysians. Thus, it is fundamental to study the reception and acceptance of insurance schemes by the population and to identify the knowledge and information regarding Malaysians' reception, specifically on the factors influencing the demand for medical and health insurance. As such, this study sought to identify factors that influence the demand for health insurance in Malaysia, both for private and personal health insurance, as well as for social health insurance.

METHODS

Literature search

A systematic search was performed independently for published articles between 2013 and 2018 from six major search engines, including Google Scholar, Scopus, PubMed, Ebscohost, Ovid Medline, and Science Direct. PRISMA flow checklist was used in this research. The retrieved articles were then gathered in a shared online folder. All relevant published articles were retrieved from five years of latest publications to attain the recent evidence on the factors influencing the demand or willingness to pay of health insurance, either private or social health insurance or NHI among the Malaysian population. The keywords, which were determined after a comprehensive search of literature and consultation with a librarian, are as follows:

Health Scheme" OR "Medical Insurance" OR "Health Insurance" OR "Medical Card" OR "Health Card" OR
"Health Financing Scheme" OR "Insurance Policy"
AND

“Factors Influence” OR “Willingness to Pay” OR “Demand”
AND
Malaysia

A total of 437 articles were found through database search and after removing 320 duplicate articles based on assessment of inclusion criteria. The inclusion criteria refer to any study performed among Malaysian populations, published between 2013 and 2018, and studies that discuss factors influencing willingness to pay or to purchase medical insurance. The factors include at least socio-demographic and socioeconomic factors. The titles of all the articles were screened and only 102 relevant articles were identified. Next, the articles were screened by reviewing the abstracts and as a

result, 16 articles were potentially eligible to be included in the final review. Only original articles were included for this study. Full text versions of all the relevant articles were obtained. Articles without full text were excluded from this study. Each variable from the retrieved articles, including study design, sample population, study tools, and study outcomes, had been extracted. The outcomes included the percentage of population that supported NHI and the number of population willing to pay for the policy.

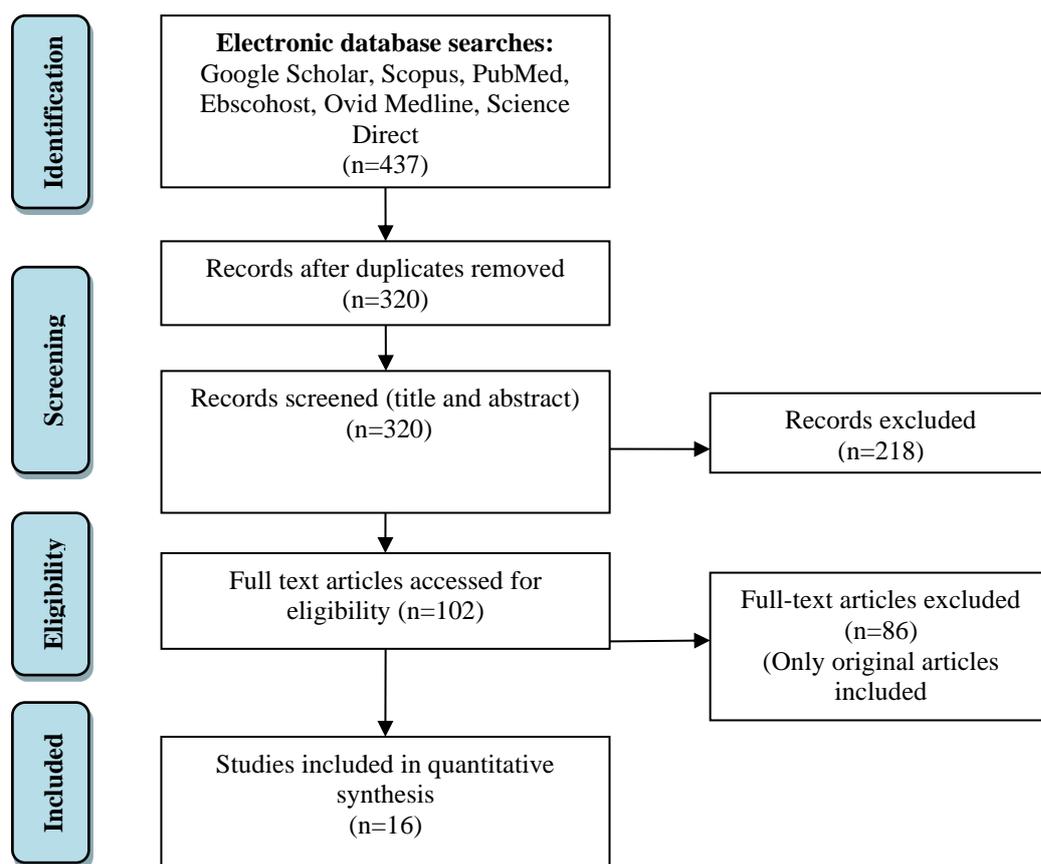


Figure 1 PRISMA flow chart describing the steps in retrieving, screening records and final records number

RESULTS

Characteristics of included studies
Eight articles were included in the final analysis.
Most studies applied self-administered

questionnaire as the study tool, while two studies performed face-to-face interviews with structured questionnaires. The characteristics of each study are listed in Table 1.

Table 1 Characteristic of studies involved

No.	Author	Sample population	Study design	Tools	Influential Factors	Outcome
1.	Almualm et al. ⁸	236 patients attending specialist clinic	Cross-sectional study July-October 2012	Structured questionnaire validated	-knowledge -cost enrolled -services included	53.8% had health insurance; 71.2% supported NHI; 61.4% were willing to pay RM240/yr >63.1% were willing to contribute average \$114.38 per household per month for VCHI
2..	Shafie & Hassali ⁹	472 random sample	Cross-sectional study August-September 2009	Extent of WTP was assessed using contingent valuation method	-ethnic -education level -household monthly income -presence of chronic disease -presence of private insurance coverage	Household expenditure for healthcare ranged from RM1-RM2000 or 0.05 to 50% of monthly income 42% of Malaysians were insured
3.	Aizuddin and Aljunid ¹⁰	774 Households in peninsular Malaysia	Cross-sectional	Face-to-face interview using structured questionnaire	-age -monthly income	Household expenditure for healthcare ranged from RM1-RM2000 or 0.05 to 50% of monthly income 42% of Malaysians were insured
4.	Zakaria et al. ¹¹	Staff of public higher learning institution	Correlation	Self-administered questionnaire	-knowledge -saving motives -religiosity	72.5% of academic staff of public university were willing to pay for SHI for RM79.32/month
5.	Salameh et al. ¹²	288 academic staff of public university	Cross-sectional study April-June 2015 Stratified random sampling	Self-administered questionnaire Contingent valuation method	-age -education level -seniority -mean monthly income, -small household size	61.1% WTP for Health Insurance. Of those, 25.7% WTP max RM20/head/month 23% WTP RM 40/head/month (RM5-RM200/head/month or RM22-RM880 per household/month)
6.	Saimy et al. ¹³	Staff of local authorities in Petaling District	Cross-sectional study	Self-administered questionnaire Contingent valuation method by double-bounded dichotomous choice format	-education -monthly salary -knowledge on who is allowed to join SHI, -difference in payment in terms of health status -difference in payment for those unemployed -allowance to take additional coverage from private health insurance	61.1% WTP for Health Insurance. Of those, 25.7% WTP max RM20/head/month 23% WTP RM 40/head/month (RM5-RM200/head/month or RM22-RM880 per household/month)
7.	Husniyah et al. ¹⁴	500 public sector employees from four states in Peninsular Malaysia	Cross-sectional study	Self-administered questionnaires	-income level -investment activity -self-esteem	

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No.	Author	Sample population	Study design	Tools	Influential Factors	Outcome
8.	Ng et al. ¹⁵	240 Malaysian residents	Cross-sectional study	Face-to-face interview using structured questionnaire	-income level -knowledge of life and health insurance -income protection -risk attitude -social influence	87.1% had medical or life insurance

NHI= National Health Insurance; WTP=Willingness to pay; VCHI= voluntary community-based health insurance; SHI = Social health insurance

Factors influencing demand of medical insurance
Various factors were identified that influenced the willingness to pay for medical or health insurance in Malaysia. The factors were divided into three main

themes, namely personal factors, social factors, and economic factors. The factors were categorised into themes, as presented in Table 2.

Table 2: Classification of Factors Influencing Demand for Medical and Health Insurance in Malaysia

Personal factors (n=20)	Social factors (n=4)	Economic Factors (n=15)
Education level (5)	Residential locality (1)	Household monthly income(7)
Age (5)	Social influence (1)	Cost to pay (2)
Knowledge (4)	Healthcare services included (1)	Investment activity (2)
Ethnicity (1)	Healthcare services utilities (1)	Healthcare expenditure (1)
Presence of chronic disease (1)		Presence of private insurance coverage (1)
Religiosity (1)		Income protection (1)
Household size (1)		Different payment option for unemployed (1)
Self-esteem (1)		
Risk attitude (1)		

Personal Factors

Personal factors are the main factors identified from all the studies, which accounted about 52% of all the factors portrayed in Figure 2. Many studies reported education as the main factor that influenced the demand of health or medical insurance among the Malaysian population. A study in Penang showed those with tertiary education preferred voluntary community-based health insurance, when compared to those with upper secondary education level.⁹ The study also found that 71.2% of the study population, who were mostly educated, supported the implementation of NHI, whereas 61.4% were willing to pay for health insurance up to RM240 per year. Higher education level was associated with higher willingness to pay for social health insurance among staff from public universities and local authorities in the Petaling District.^{12,13} Age is also one of the most important factors that influenced the demand for health insurance. Shafie and Hassali⁹ proved that the younger age group was associated with more willingness to pay for social health insurance, as compared to older age group. This finding is supported by a study conducted by Aizuddin and Aljunid¹⁰, wherein they reported that the younger age group had higher ability to pay for health insurance than those in the older age group.

Another personal factor that influenced the demand of medical insurance is knowledge. This is

supported by Almualm et al.⁸, in which respondents with poor knowledge regarding NHI may hinder the success of NHI in Malaysia. Financial literacy is the knowledge on how to manage finance wisely, such as insurance, investment, and savings. Those with good knowledge or literacy in finance were likely to purchase medical insurance as opposed to those with lower level of knowledge on health financing.¹¹ Knowledge on who are allowed to join the social health insurance, difference in payment between those employed and unemployed, with chronic illness or without chronic illness are also significant personal factors that influenced the demand for medical insurance.¹³

Economic Factors

Household monthly income is one of the most important determinant factors of demand of health insurance. Those with higher monthly income (> RM3500) were 2.5 more likely to purchase medical insurance compared to those who earned a low income.^{14,15} Among staff in public universities, higher willingness to pay for social health insurance was noted among those with monthly income ranging from RM5000 to RM10000.¹² Monthly income was found to be a significant predictor of the ability to pay for health insurance.¹⁰ Whereas another study found a significant difference in monthly income of respondents between those

willing and unwilling to pay, wherein the mean income among those willing to pay was higher than those unwilling to pay.¹³ The premium price was also a significant factor that determined one's willingness to pay for voluntary community-based health insurance in Malaysia.⁸ Respondents subscribed to private or previous insurance were likely willing to pay for health insurance, when compared to those uninsured, most probably due to their experience with the benefits of having insurance and their familiarity with its value.⁸

Social Factors

The least contributing factors that influenced the demand of medical insurance were social factors.

The decision on purchasing life insurance was influenced by family and friends.¹⁵ Those married preferred voluntary community-based health insurance more than use OOP expenditure.⁸ Unmarried or smaller household size and have less dependent persons were more willing to pay for social health insurance, when compared to those married and have a huge number of dependent persons.¹¹ Feasibility, including services embedded in the social health insurance, was an endogenous factor that influenced the success of social health insurance, such as services including very high-cost medical events, which would deplete the fund quickly.⁸

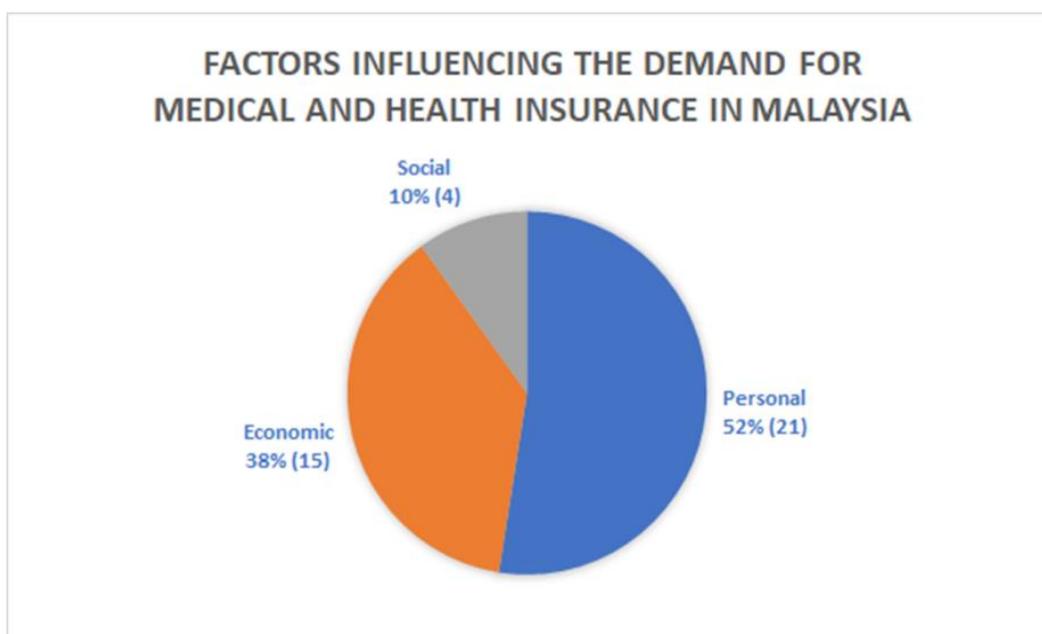


Figure 2 Factors influencing the demand for medical and health insurance in Malaysia

DISCUSSION

At the tabling of the 2018 Budget in October 2017, the Prime Minister of Malaysia announced an allocation of RM50 million for the Voluntary Health Insurance Scheme (VHIS) to empower the health sector.¹⁶ The MOH had planned to introduce VHIS by mid-2018, projected to be cheaper than private health insurance schemes, as it would be implemented by an agency under MOH and not profit-orientated. It will be voluntary, non-profit driven, and managed by a non-profitable organisation under the MOH. Members of the national insurance scheme may also have access to private healthcare. Its vision is to enable Malaysians to have access and maintain coverage to better care and treatment. It also acts as a social safety net, particularly in ensuring quality medical treatment for the elderly and those earning lower income.

The implementation of National Social Insurance Scheme (NHIS) is arguably inevitable. It

has been implemented by many countries worldwide, including countries within the same region as Malaysia, such as Singapore, Thailand, and Indonesia. The latter, for instance, introduced a new mandatory health insurance programme in 2014, with a comprehensive social security programme for workers in 2015.¹⁷ Generally, NHIS aims for the provision of healthcare services that are comprehensive, universal, and free at the point of delivery. Furthermore, it offers protection against the financial risk of high-cost medical emergencies and mitigates the probability of its citizens having to rely on personal savings to cover the cost of treatment and medication.

Prior to execution of any major national-level programme, especially if it concerns financial matters, the perception and acceptance of its people must be acquired first. This is one of the many factors to consider in ensuring the success of the implementation of a new programme. This review

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found that more than half (52%) of the factors that influenced the decision of Malaysians to get any kind of medical and health insurance, be it voluntary social health insurance or private health insurance, were personal factors, with education level and knowledge contributing to the largest portion (10/40; 25%). A previous study revealed the absence of appropriate knowledge among the public regarding NHI.¹⁸ Lack of insurance knowledge is one of the most important barriers in purchasing health and life insurance, including respondents being unaware about it. This signifies the importance of enhancing awareness among the respondents regarding health insurance, as this has a great impact on the likelihood of buying health insurance. Furthermore, those insured appeared to be more willing to pay for health insurance, when compared to those uninsured. This may be due to their experience and knowledge regarding the benefits of subscribing to insurance and their familiarity with its value. Therefore, there is a need to enhance knowledge of the public on social health insurance should the Government intend to make NHIS in Malaysia a reality.

Interestingly, the factors that influence the demand for any kind of health insurance may differ for those in other countries. For instance, Ghana aims to provide basic healthcare services to its residents through mutual and private health insurance schemes. The establishment of the scheme ensured an improvement in the quality of basic health care services for all citizens, especially the poor and vulnerable. After years of being burdened under the cash-and-carry system, the introduction of NHIS has received loud applause especially among the poor who now find a social protection system that provides succour for their healthcare expenditure problems. Unfortunately, no attempt has been made to understand the factors that have accounted for the low coverage of the scheme or what factors motivate people to join the scheme. According to Owusu-Sekyere and Chiaraah¹⁹, the main factor that influenced the demand for medical and health insurance for Ghana was gender, which implies that males were more likely to buy health insurance than females. This is probably because men are typically the breadwinner in Ghana, hence they insure to concentrate on other expenses. Besides gender, the other factor was marital status, in which married couples patronised the health insurance policy than those unmarried due to the many responsibilities the former has over the latter. Other factors that might influence the demand for health insurance in Ghana were employment status, cost of curative care, income, family size, and higher levels of education, mainly because they, probably, understood the scheme better.

In India, very few studies analysed the health insurance sector and the challenges it faced. According to Kansra and Pathania²⁰, the main factor

that influenced the demand for medical and health insurance by Punjabis in India was the so-called formalities bottleneck, which reflected the intricacy of the scheme processes. Other factors were agent-related problems, coverage issues, awareness, and negative feedback received. The association between the various variables linked with the respondents had been concluded to awareness about health insurance. Other factors were coverage of illnesses and knowledge about insurance that affected health insurance purchase decision positively. More knowledge about health insurance would help them in making an informed choice about their purchase. In addition, number of children in the family, age, and perception regarding future healthcare expenditure were also found to be significant.

Factors that influenced the demand for medical and health insurance in China were income level, development of insurance market, level of marketization, level of education, development of social security pension, children dependency ratio, and elderly dependency ratio.²¹ China has explored the factors that influenced medical demand, as well as the underlying mechanisms of those factors. One of the most important factors refers to the patients themselves, particularly the knowledge they acquired regarding health insurance, their economic status and monthly salary, health status, demographic factors, and patients' perceptions on medical need and medical use, types of health profiles, and social relations.

One of the issues in health insurance is concerning information dissemination. There is inadequate information regarding health and life insurance to the public. The information regarding insurance products may differ among the rural community, as they tend to live close to each other and the information may be easier for dissemination. Other factors that may influence the demand of medical health insurance is negative perception to any proposed user fees in healthcare, as the current welfare-based healthcare system implementation has made the public rely heavily on the free subsidised healthcare system.²²

CONCLUSION

Financial protection is the core of UHC and one of the final coverage goals. Health financing policy directly affects financial protection. Financial protection is achieved when direct payments to NHI are made to obtain health services, hence not exposing people to financial hardship and threaten their living standards. Financial protection requires cross-subsidisation between rich and poor, as well as for those between low-risk and high-risk. Overall support towards NHI in Malaysia appeared high. Economic structure and development dictated the number of people who can be covered under NHI. Education and promotion are important to

understand why such policies were introduced and how they could serve the public before implementing major policies. These elements would capture the essence of 'health promotion', which is about enabling people to take control over their health and thereby improving their health. Health education and health promotion are two terms that are sometimes used interchangeably. Health education is about providing health information on health insurance and knowledge to individuals and communities. This is done by increasing their knowledge or influencing their attitudes, whereas health promotion takes a more comprehensive approach of promoting in terms of medical and health insurance in communities. It is tuned to respond to developments with a direct or indirect bearing on health, such as changes in the patterns of cultural beliefs on health insurance.

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