



**DETERMINANTS OF HEALTHCARE UTILISATION
AMONG ELDERLY ATTENDING SELECTED PUBLIC
HOSPITALS IN PENINSULAR MALAYSIA**

BY

NOOR'AIN MOHAMAD YUNUS

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ABSTRACT

Population ageing is a significant demographic event in the 21st century. This phenomenon is driven by a demographic transition, which consists of a shift from high fertility and high mortality rates to lower fertility and lower mortality rates. The growing number of the elderly in Malaysia poses new challenges to the government, as this will impact the national development, both economically and socially. Several works of literatures that are related to healthcare utilisation are available, however, the psychological aspects and the level of health literacy that influence the healthcare utilisation are hardly focused upon, specifically in Malaysia. Thus, there is a lack of empirical evidence in the study area that needs to be linked. Moreover, there is yet no comprehensive model of healthcare utilisation in the current literature. Realising the need to closely examine the determinants of elderly healthcare utilisation, this research aims to identify the determinants of healthcare utilisation among the elderly in Malaysia. A positivist explanatory approach was used to explore the relationships between variables. The data collection was carried out for a period of two months. An administered questionnaire that consisted of seven sections measuring demographic data, need for care, attitude towards ageing, health literacy, healthcare utilisation, self-perceived health status, and patient satisfaction, were used to collect data. Four hundred and seventy-seven (n=477) elderly outpatients attending outpatient department in 14 hospitals were recruited. Sample were selected using non-probability, convenience sampling. The SPSS Statistics version 23.0 was used for data analysis. Findings suggested that age, ethnicity, education level, income level, need for care, attitude towards ageing and health literacy were associated with healthcare utilisation. Hierarchical multiple regression was conducted to identify the predictors of healthcare utilisation. The findings from this analysis indicate that education level, income, need for care and attitude towards ageing of the elderly were significant factors that predict healthcare utilisation. Finally, mediation analysis was computed to test the mediating effect of health literacy on age and healthcare utilisation and education level and healthcare utilisation. Findings reveal that health literacy was found to give a significant mediating effect between age and education level with healthcare utilisation. This research provides further insight into determinants of healthcare utilisation on the elderly in Malaysia. The major theoretical contributions of the study include extending the previous literature on healthcare utilisation. From the practical viewpoint, the findings have provided evidence for the healthcare provider and policy makers to better understand factors that influence healthcare utilisation among the elderly in Malaysia. However, the study is subjected to several limitations. The approach of this research was deductive in nature, which begins with a theory, developing hypotheses from that theory, and then collecting and analysing data to test those hypotheses, which limits the researcher's understanding of what is really happening, or what is perceived to happen in the health care setting. Hence, future efforts should be placed on examining the determinants of healthcare utilisation among the elderly from qualitative perspectives.

ملخص البحث

يشكل السكان المسنون حدثاً ديموغرافياً هاماً في القرن الحادي والعشرين. وتعزى هذه الظاهرة إلى التحول الديمغرافي المتمثل في التحول من الارتفاع في كل من معدلات الخصوبة ومعدلات الوفيات، إلى انخفاض المعدلات في كل من الخصوبة والوفيات. ويشكل العدد المتزايد من المسنين في ماليزيا تحديات جديدة للحكومة، إذ أن ذلك سيؤثر على التنمية الوطنية، من الناحيتين الاقتصادية والاجتماعية. وبالرغم وجود العديد من الأعمال الأدبية المتعلقة باستخدام الرعاية الصحية، إلا أن الجوانب النفسية ومستوى المعرفة الصحية، التي تؤثر في استخدام الرعاية الصحية، فإنه من الصعب التركيز عليها، خصوصاً في ماليزيا. ومن ثم، يوجد نقص في الأدلة التجريبية في الدراسات المرتبطة بهذا المجال. إضافة إلى ذلك، لا يوجد حتى الآن نموذج شامل لاستخدام الرعاية الصحية في الأدب الحالي. وإدراكاً للحاجة إلى فحص دقيق لمحددات استخدام الرعاية الصحية للمسنين، فإن هذا البحث يهدف إلى معرفة محددات استخدام الرعاية الصحية بين المسنين في ماليزيا. وقد استخدم المنهج التفسري الإيجابي لاستكشاف العلاقة بين المتغيرات، واستغرق جمع البيانات شهرين. وتم جمع البيانات باستخدام استبانة مؤلفة من سبعة محاور لقياس البيانات الديموغرافية، والحاجة إلى الرعاية، والموقف من الشيخوخة، ومحو الأمية الصحية، واستخدام الرعاية الصحية، والتصور الذاتي للحالة الصحية، ورضا المرضى. وتم اختيار أربع مائة وسبعة وسبعون (477 =) من المرضى المسنين الذين يحضرون إلى العيادات الخارجية في 14 مستشفى. وتم اختيار عينة غير احتمالية مناسبة. واستخدمت الدراسة (SPSS) الإصدار 23.0 لتحليل البيانات. وتشير النتائج إلى أن العمر، والعرق، ومستوى التعليم، ومستوى الدخل، والحاجة إلى الرعاية، والموقف من الشيخوخة، ومحو الأمية الصحية لها ارتباط باستخدام الرعاية الصحية. وتم استخدام الإندثار المتعدد الهرمي لتحديد المتنبئين باستخدام الرعاية الصحية. وتشير نتائج التحليل إلى أن مستوى التعليم والدخل والحاجة إلى الرعاية والمواقف تجاه الشيخوخة للمسنين عوامل هامة في التنبؤ باستخدام الرعاية الصحية. وأخيراً، تم حساب تحليل الوساطة لاختبار تأثير الوساطة في محو الأمية الصحية على العمر واستخدام الرعاية الصحية ومستوى التعليم. وكشفت النتائج عن أن محو الأمية الصحية لها أثر كبير في الوساطة بين السن ومستوى التعليم لاستخدام الرعاية الصحية. هذا البحث يوفر المزيد من الوعي في محددات استخدام الرعاية الصحية للمسنين في ماليزيا. وتشمل المساهمات النظرية الرئيسية للدراسة توسيع الأدبيات السابقة حول استخدام الرعاية الصحية. ومن الناحية العملية، قدمت النتائج أدلة لمقدمي الرعاية الصحية وصانعي السياسة لفهم أفضل للعوامل التي تؤثر على استخدام الرعاية الصحية بين المسنين في ماليزيا. ومع ذلك، فالدراسة تخضع لعدة قيود. والمنهج المستخدم في هذا البحث هو منهج استنتاجي بطبيعته، والذي يبدأ بالنظرية، ووضع الفرضيات بناء على تلك النظرية، ومن ثم جمع وتحليل البيانات لاختبار تلك الفرضيات، مما يحد من فهم الباحث لما يحدث حقاً، أو ما ينظر إليه على أنه يحدث في وضع الرعاية الصحية. ومن ثم، ينبغي بذل جهود مستقبلية لفحص محددات استخدام الرعاية الصحية بين المسنين من المنظور النوعي.

APPROVAL PAGE

The thesis of Noor'ain Mohamad Yunus has been approved by the following:

Noor Hazilah Abd Manaf
Supervisor

Azura Omar
Co-Supervisor

Arif Hassan
Internal Examiner

Samihah bt Khalil
External Examiner

Rahmah Mohd Amin
External Examiner

Tunku Mohar Tunku Mohd Mokhtar
Chairman

DECLARATION

I hereby declare that this dissertation is the result of my own investigations, except where otherwise stated. I also declare that it has not been previously or concurrently submitted as a whole for any other degrees at IIUM or other institutions.

Noor'ain Mohamad Yunus

Signature

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INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Population ageing is one of the most important demographic events in the 21st century. This phenomenon occurs globally due to the increment of elderly people that is relative to the younger generation. Due to the increment of number and percentage of the elderly people in Malaysia, there is the need for extensive and current information on this population in terms of issues regarding the elderly people that are becoming increasingly important to be discussed (Wan-Ibrahim & Zainab, 2014). In the recent years, issues such as financial, health, psychology, family relations, transportation and education are among the issued relation to elderly people (Tengku Aizan, 2012) that were explored by the researchers. However, the country is not prepared to become an ageing nation.

Population ageing is inevitable and this will be a major challenge to Malaysian healthcare system (Ambigga et al., 2011). Based on the report on the facts relating ageing by the World Health Organisation (WHO), the occurrence of disability increases with age and it is reported that more than 46 per cent of people aged 60 years and above have disabilities (World Health Organisation, 2012). Moreover, the increment in age is also linked to higher morbidity, higher use of health services, and greater demand for specialised services (Crimmins, 2010). Thus, ageing is a matter of great concern for the health sector as ageing population will lead to the increase in demand for healthcare and social support, which may consume a large portion of funds to be allocated for healthcare (Rechel & Doyle, 2009).

Besides that, the above-mentioned factors could lead to the increase on the complexity of health services requirement and expenditure. The changes that happened in the age structures of the world will become a major challenge to the healthcare professionals in providing services for the elderly people (Christensen, Doblhammer, Rau & Vaupel, 2010). It is important for the healthcare providers and policy makers to understand this scenario in the effort to plan for the future healthcare services for the elderly people. In relation to this phenomenon, this study intended to investigate the determinants for the healthcare utilisation of the elderly people in Malaysia. The study aimed to bridge the gap in the healthcare utilisation's literature in relation to the elderly people by understanding the factors that could lead to the utilisation of healthcare facilities.

1.2 POPULATION AGEING AROUND THE WORLD

The global population is living longer as a result of improved diet, education, better sanitation, medical advances, economic prosperity, falling fertility rates, lower infant mortality, and increment in the survival at old age. By the year 2050, the elderly people will be able to live 60 years and above, and the statistic will outnumber children under the age of 15. According to report, the average life expectancy of the global population was 71.4 years (73.8 years for females and 69.1 years for males) (WHO, 2016). It was found that women live longer than men from all around the world. According to the latest WHO report that was published in 2016, Japan has the highest life expectancy in the world and Japanese are expected to live until the age of 83.7 years old. Singapore ranked number three in the world for the life expectancy of 83.1 years old. The life expectancy in Malaysia is 75 years old, which makes Malaysia

ranked number 67 for life expectancy. Table 1.1 shows the life expectancy in selected countries.

Table 1.1 Life Expectancy in Selected Countries

Country	Rank	Both Sexes life expectancy	Female Life expectancy	Female rank	Male Life expectancy	Male rank
Japan	1	83.7	86.8	1	80.5	6
Singapore	3	83.1	86.1	2	80.0	10
Australia	4	82.8	84.8	7	80.9	3
United Kingdom	20	81.2	83	27	79.4	16
United States	31	79.3	81.6	33	76.9	32
Malaysia	67	75	77.3	83	72.7	65

Source: WHO, 2016

Japan has the highest proportion of older adults in the world, where 30 per cent of its population aged 60 or over (UNDESA, 2013). By 2030, one in every three people will be 65+ years old and one in five people will live 75+ years (Muramatsu & Akiyama, 2011). The average life expectancy for Japanese male is 80.5 years old and the female is 86.8 years old (WHO, 2015). The Japanese government has allocated a number of policies for the elderly people, and they are exploring ways to promote independent living (Oi, 2015a).

Most Japanese live to be well over 100 years old. Few reasons attributed to their longevity include strong community bonds, healthy life style, and less stressful life. Moreover, the elderly people in Japan chose to remain active and most of them are still working in their 80s and some even work even in their 90s. Additionally, one of the secrets of positive ageing among the elderly people in Japan is brain training, which is the country's latest computer game craze that slow down the onset of dementia and Alzheimer's disease (McCurry, 2006). Researchers from Tohoku

University in Japan reported that elderly men and women who played the game “Brain Age” by Nintendo can improve some of their declining cognitive abilities (Blue, 2012). Moreover, a study also found that this is a convenient means to improve some cognitive functions (Nouchi et al., 2013).

Despite the positive image on Japan’s ageing population, Japan faces major challenges stemming from simultaneous ageing population as it affects the economies, as well as both political and social issues in Japan. The impact of ageing population has resulted in older workforce as older workers remained healthy and they also delay their retirement. The growing population of older workers as well as shrinking population of younger workers has triggered concerns regarding the national pension system. The introduction of “Abenomics” or also known as “womenomics” was undertaken to overcome the shortage of workers in Japan by placing more women into the labour force. Moreover, the government has taken a more welcoming approach of hiring highly skilled foreign workers. Japan’ Prime Minister has also vowed to provide them with world’s fastest path to permanent residency.

By tradition, the elderly people in Japan should be taken care by their adult children and the Japan’s government encourages the creation of three-generation households where married couple cares for both children and parents (Kelly, 1993). However, the migration of younger generation to major cities in Japan, the entrance of women into the workforce, and the increasing cost of care for young and old dependents have made it difficult for the children to take care their parents. The proportion of those living with child or other relatives has decreased from 87per cent to 48per cent (National Institute of Population and Social Security Research, 2011). This effort required new solutions, including nursing homes, adult day-care centre, and home health programmes (Oi, 2015b) for every Japanese elderly who aged 65

years old and above based on their physical and mental status, regardless of family availability and economic status. It is reported that Japan has closed 400 primary and secondary schools and converted some of them to care centres for the elderly people (McNeill, 2015).

As Japan is leading other countries in handling their ageing population, their experience could be exemplary to other countries. First, the Japanese government identified the ageing population as a critical societal issue and implemented a number of policies for the past two decades. In addressing the greying population for example, the government is encouraging fertility to increase the number of population, as well as engaging women and elderly people in the workforce. Second, the government emphasised the community-building efforts by providing social care such as daily life support services, in addition to long-term and medical care in a comprehensive and seamless manner within the community (Tsutsui, 2014).

Besides that, the ageing population is also one of the serious concerns in the European countries. The percentage of Europeans who aged over 65 is assumed to increase from 16 per cent in 2010 to 29.3 per cent in 2060. Moreover, It is predicted that almost one in three people will be over 65, and more than one in ten will aged over 80 years old (European Commission, 2014). The ageing pattern in Europe is changing and currently, Western and Northern Europe have the oldest populations. However, it is assumed that in 2060, the oldest populations will be in Eastern and Southern Europe. In 2010, the number of elderly people over 65 years old was the highest in Germany (20.7 per cent), but, the highest percentage will be in Latvia for 2016 (35.7 per cent) (European Commission, 2014).

Europe is ranked as the best continent to grow old in the world (HelpAge International, 2014). The Global Age Watch Index 2014 ranked 96 countries

according to the social and economic wellbeing of their older people. The index showed that Norway is the best country to grow old, followed by Sweden and Switzerland, while Europe boasted 70 per cent of the countries in top 20. The index measured four key areas, namely income security, health, personal capability, and whether the person lives in an “enabling environment”. A study by the Organisation for Economic Cooperation and Development (OECD) has reported that Norway is the world’s third best country in the world for providing care to the elderly people (Tancau, 2011). Their citizens have benefited from decades-old policies that were designed to provide financial security for the elderly people. In addition, the efficient public transport system, strong sense of security, and high level of employment among the senior citizens have made Norway the best place to grow old (Alexander, 2014).

The ageing population in Europe is also known as the greying of Europe, which is a phenomenon describing the decrease in mortality rates, and higher life expectancy among the European populations (Giuseppe Carone & Declan Costello, 2006) that posed significant risks to potential economic growth and placed substantial pressure on public spending. It is reported that European countries spent more than a quarter of their GDP on social protection, which benefited them in the form of pensions, health and long-term care (European Commission, 2012).

The elderly people in Europe suffered disorders such as cancer, fractured hips, strokes, diabetes and dementia (The Dutch National Institute for Public Health, 2012). The number of people with dementia in European countries is predicted to double with the amount of 14.5 million between 2010 and 2050. Dementia is one of the emerging priorities of health programmes and the European Union (EU) urged its members to develop national plans and strategies that specifically dedicated to

dementia. Besides that, the commission also provides funding for research in addressing neurodegenerative diseases. As an example, the Human Brain Project was funded by the EU to address the complexity of brain diseases such as Alzheimer and dementia that costs \$1.6 billion (European Union, 2016).

The change in demographic trend could pose as both challenge and opportunity. A significant portion of the elderly people is expected to require physical and cognitive assistance. However, there is a concern for the shortages of space and staff at nursing homes and other care facilities, which is already an issue today (Tapus, Mataric & Scassellati, 2007). Regarding this issue, Information and Communication Technology (ICT) is considered as an important tool to promote ageing-in-place and facilitating elderly people to live independently. This innovation has given rise to the field of gerontechnology, which is an interdisciplinary field that links existing developing technologies to the aspirations and needs of the elderly people (Bouma, Fozard, Bouwhuis & Taipale, 2007). Gerontechnology concerns the matching of technological environments to the elderly's health, housing, mobility, communication, leisure and work. The Japan's government has promoted ICT industry development in order for the ageing society to benefit from the technology, and they had set aside \$24 million of the 2013 budget for research and development of robots for elderly care (Kelly, 2013). Japan is already experimenting with eldercare robots in nursing homes with the help of artificial intelligence. These robots have human-like limbs to help move and carry objects, and they are designed to offer therapeutic care.

1.3 SITUATION OF THE POPULATION AGEING IN MALAYSIA

In Malaysia, elderly people are defined as those who are 60 years old and above, which is similar with the definition by the United Nations World Assembly, Vienna in 1982. The size and structure of elderly people is important, and there is a wide range of implications for the country. Table 1 shows that Malaysia experienced considerable growth for its older population between 1970 and 2015. According to the Department of Statistics Malaysia (DOSM), the growth in Malaysia was in the range of 0.564 million in 1970 to 2.825 million in 2015 with an increase of 3.9 per cent between those two years. In 2020, it is predicted that the population that aged 60 years old and above will be 3.209 million and Malaysia is expected to be categorised as an ageing nation by year 2030 as older people constitute more than 15 per cent of the population according to the guideline of United Nation (2009).

Table 1.2 Trend of the Elderly Population in Malaysia from 1970 – 2030

Year	Total Number of Population	Number of Elderly Population	Percentage of Elderly Population
1970	10.881	0.564	5.2
1980	13.879	0.745	5.7
1990	18.102	1.032	5.9
2000	23.494	1.45	6.3
2010	28.9	2.076	7.9
2014	30.2	2.693	8.9
2015	30.99	2.825	9.1
2020*	33.7	3.209	9.9
2030**	35.3	5.284	15.0

Source, Department of Statistics 1970 to 2015

** Projection of World Health Organisation (WHO)

*Projection of Department of Statistics Malaysia

It has been recognised that besides the elderly people, different age groups also display different characteristics and they are not homogenous in terms of their needs.