



## Health Awareness amongst Adults above 40 Years of Age

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### ABSTRACT

*Adults above the age of forty may start to encounter problems regarding their health. This research is to determine the common diseases or ailments experienced by adults over 40. A sample of 150 respondents was gathered from three states in Malaysia. Demographic profiles such as age, gender and race were obtained and questions regarding attentiveness and awareness of health were asked. Four hypotheses were tested. Multiple regression analysis using SPSS 12.0 was employed to analyze the data. The result shows 85.8% of respondents have one or more diseases. In addition, men and women have different diseases. Moreover, different race have different disease. Furthermore, healthy lifestyle, good diet and weight management are determinants of health awareness. The results are very useful for health administrators to plan strategies to improve public health in Malaysia.*

**Keywords:** Health awareness, adults 40 years and above, types of disease

### Introduction

Health is a very crucial topic to discuss. People who are above forty years of age always complain of diseases, which never occur when they were younger. Adults who are above forty years of age must always be concerned about their health. Healthy body will bring happiness to their life and family. Thus, a study about health is very important as it concerns everyone both young and old.

A study which was done in Malaysia by Rabindarjeet (1999) mentioned that Malaysians are struggling with the same health issues as any other industrialized nations. Infectious diseases are mostly under control and non-communicable diseases such as diabetes, coronary heart disease (CHD) and hypertension, have become leading causes of mortality and morbidity. This disease pattern is expected to magnify and increase with the current demographic trends of aging and urbanization.

A study by the Health Ministry and reported by Datin Seri Rosmah Mansor revealed that from 1990 to 2005, there is a 135% increment in CHD among women. Rosmah pointed out that 46% of women around the age of 50 suffered from CHD and 10% from breast cancer. In addition, 31% of women around that age had died of CHD while only 3% died from breast cancer. Women who have a higher risk of getting CHD were those who had reached menopause, led a sedentary lifestyle, were obese, suffer from diabetics and are smokers (Study Shows, 2006).

Thus, this survey is conducted to identify how well do Malaysians adults above forty years of age manage their life and what is their level of awareness and apprehension about their own health.

### Purposes of The Study

As stated in the literature, in the past few years there has been an increase in the prevalence of diseases among adults 40 years old and above in Malaysia. The present study intends to discuss the types of diseases according to gender, race, age and smoking habits. From the previous study and data taken from The Ministry of Health, the number of adults with diseases in Malaysia is alarmingly high. Another objective of the present study is to identify factors that are significantly associated with health awareness among adults.

## Hypothesis

There are four hypotheses to be tested in this study:

H<sub>01</sub> : There is no relationship between types of disease and gender.

H<sub>02</sub> : There is no relationship between types of disease and race.

H<sub>03</sub> : There is no relationship between types of disease and smoking habit.

H<sub>04</sub> ; None of the variables make a significant contribution to the awareness and apprehension about health of the respondents.

## Review of Literature

Hayes et al. (2006) stated that more than one third (36.5%) of all women in his research had multiple risk factors (i.e.,  $\geq 2$  of diabetes, currently smoking, possess high blood pressure, high cholesterol level, are obese, or physical inactive). The age-standardized prevalence of multiple risk factors was the lowest in whites and Asians. After adjustment for age, income, education, and health coverage, the odds for multiple risk factors was greater in African Americans (OR = 1.53, 95% CI = 1.42-1.64) and Native American women (1.36, 95% CI = 1.11-1.67) and lower for Hispanic women (OR = 0.83, 95% CI = 0.76-0.91) compared to white women.

Prevalence estimates and odds of multiple risk factors increased with age; decreased with education, income, and employment; and were lower in those with no health coverage. Smoking was more common in younger women, whereas older women were more likely to have medical conditions (high blood pressure, high cholesterol level, or diabetes) and physically inactive. Over one third of American women have two or more risk factors for CHD and stroke.

According to the Health Ministry's statistics, about 46 per cent of Malaysian women are suffering from CHD, and those who have reached menopausal stage or already have their ovaries removed; are in high risk of getting CHD. The Deputy Prime Minister's wife Datin Seri Rosmah Mansor who quoted the Health Ministry's statistics, said women above 55 and with family history of having the disease is also among the high-risk group ("*About 46*,"2006).

A research done by Khor and Gan (1992) revealed that the prevalence of diabetes has currently risen from 0.65% in 1960 to about 4%. The mortality risk for both CHD and diabetes is highest among the Indians compared to Malay and Chinese. The Chinese show the highest mortality rate for cancers of breast and colon. This is reflected, partly, because more people especially in the urban areas are seeking treatment and improved diagnosis.

Alwan (1993) mentioned that diabetes was highly associated with the risk factors of diabetes, such as age, obesity, hypertension and family history. Farouq and Ahmad (1996) also confirmed the statement by stating that it was observed that there was a sharp increase in the overall prevalence of known diabetes after 40 years of age (36.9%) as compared to 10.0% below 40 years of age.

Heng et al. (2004) stated that factors related to overweight were examined in a cross-sectional survey that included 1612 female workers from 10 large electronics assembly factories in Peninsular Malaysia. The respondents were Malaysian citizens, direct production workers below the supervisory level and had worked at least for a year in the factory where they were presently employed. Prevalence of overweight and mean BMI for younger age groups were similar to Malay women in the nationwide representative National Health and Morbidity Survey II, but the older age groups in this study had higher overweight prevalence and mean BMI than the national sample. Electronics women workers face a higher risk of overweight and are an important group for nutrition intervention.

According to Calle et al. (2003), approximately 900,000 individuals of a survey, suggested that obesity may account for 14% of cancers in men and 20% of cancers in women and in this cohort, the heaviest men and women were 52% and 62%, respectively, more likely to die of cancer.

Datuk Dr Chua Soi Lek the Health Minister during a nationwide campaign: *Eat more fruits and vegetables. Cut out the fatty stuff*, said that the latest survey in 2002/03 indicated that the number of overweight adults has doubled to 4.2 million Malaysians, and 1.9 million people are

now obese. Obesity is now a major concern, and must be countered immediately (“*First Step*,” 2006).

An article from Yayasan Jantung Malaysia (The heart foundation of Malaysia) said that around 60% of all men and about 45% of all women are overweight or obese. According to the Heart Foundation 1/3 to 1/2 of Australians between 20 and 69 years have higher than recommended blood cholesterol levels and it is shown in the number of early deaths. In 1996 just over 10,000 people under the age of 70 died of heart and blood vessel disease.

Kirkland and MacLean (1999) revealed that smoking and stress or worry were mentioned as major causes of CHD by the greatest proportion of participants (41% and 44% respectively); hypertension was mentioned by only 16%. Men and women did not differ in their awareness of high blood cholesterol (cited by 23% of participants), smoking (41%), excess weight (30%) or lack of exercise (28%) as causes of CHD. A greater proportion of women than men were aware of hypertension (19% v. 12%) and heredity (31% v. 17%) as major causes of CHD. Awareness of risk factors was consistently lower in the older age group (65-74 v. 55-64 years). Among the women, there was a greater awareness of the respective risk factors as causes of CHD than among those who were smokers (60% v. 35% of nonsmokers), those who had a body mass index (BMI) of 25 or greater (38% v. 24% of those with a BMI less than 25) and those who were hypertensive (22% v. 17% of those without hypertension). Those who had experienced a heart attack had greater awareness of the major causes of CHD than those who had not. This pattern was stronger among women than among men. Of those in whom elevated cholesterol level was identified during the course of the study, 62% of men and 67% of women were unaware of their cholesterol status. Of those in whom high blood pressure was diagnosed, 43% of men and 33% of women were unaware of their hypertensive status. Thus, awareness of the major causes of cardiovascular disease is low among older Canadians, especially among men and in those 65 to 74 years of age.

Webster's New World™ Medical Dictionary (2003) defined family history as the family structure and relationships within the family, including information about diseases in family members. According to Khor (1994), the types and prevalence of CHD risk factors vary somewhat among the three main ethnic groups in peninsular Malaysia. Indians consistently show the highest prevalence for hypercholesterolemia and diabetes mellitus. Among the Malays, a relatively high prevalence of hypertension and hypertriglyceridemia has been reported. Overweight is also a risk factor among the Indians and Malays. In general, Chinese tend to have a lower prevalence for these CHD risk factors than the Indians and Malays. Parallel to the rapid socio-economic development and urbanization in recent decades is a rise in the percentage of deaths due to cardiovascular disease in peninsular Malaysia. This is from 1.8% of total deaths from all causes in 1950 to about 30% in 1991. CHD accounts for 40% of all cardiovascular diseases. The mortality rate for CHD has more than doubled between 1965 and 1991, from 24.6 per 100 000 to 57.2. While Indians have been showing the highest CHD mortality rate so far, that of the Malays has been increasing most rapidly since 1970, concomitant with the latter's increase in their proportion of the urban population in peninsular Malaysia.

A study by Farouq and Ahmad (1996) on a sample of 573 subjects from a Bahraini population showed that the proportion of diabetics with positive family history of diabetes was high (41.7%). The high frequency of positive family history in previously known diabetes subjects (47.7%) compared to 29.3% in newly diagnosed diabetics may be attributed to the awareness of the problem among those with positive history of diabetes and to the higher percentage of intermarriage in Bahrain. The non-diabetic subjects had a lower frequency of positive family history (only 23.3%). The prevalence of diabetes rose with age. It was observed that the prevalence rate of diabetes among men and women was almost equal in this survey.

A survey by Geiss et al. (2002) found that, in the 1988–1994 period, 71% (95% confidence interval [CI]=±4.4%) of all American adults with diabetes had elevated blood pressure. The prevalence of elevated blood pressure increased with age and was high among both men and women and among Mexican Americans, non-Hispanic blacks, and non-Hispanic whites. Among those with elevated blood pressure, 71% (95% CI=±4.1%) were aware and 57% (95% CI=±4.2%) were treated, but only 12% (95% CI=±3.2%) had mean blood pressure <130/85 and 45% (95% CI=±4.9%), and the remaining had mean blood pressure <140/90. The control of blood pressure was least common among older people.

Naidu et al. (2003) in their research found that Malaysian Indians are more commonly afflicted with CHD. Lip et al. (1996) in their study reported that there was a significantly lower proportion of reported regular exercise activity amongst the Asian (defined as people of south Asian or Indian subcontinent descent) women and their husbands or partners. This study demonstrates that Asian families were the least likely to take regular exercise and had a lower awareness of cholesterol or dietary content (fibre, sugar, salt) despite public health campaigns and publicity. They were however the least likely to smoke cigarettes. These ethnic differences may in part, explain the higher prevalence of CHD amongst the Asian population in the United Kingdom.

## **Methodology**

### **Instrument and Data Analysis**

A set of questionnaire was distributed to 150 people in three states of Malaysia. The respondents' identity remains anonymous and the subjects were assured about the strict confidential treatment of their responses. Only people above 40 years of age were selected as respondents in this study. The total number of respondents was 150 and the response rate was 100%.

The analysis was done by using SPSS 12.0. Descriptive statistics such as frequencies and percentages were used to describe the data regarding the respondents' demographic profile. Four hypotheses are stated and tested using the Chi-square analysis. Chi-square test was chosen because the two tested variables are nominal or categorical variables.

## **Results**

### **Demography**

Table 1 shows the demographic characteristics of the subjects by gender. A total of 150 subjects from the three states in Malaysia consist of male (60%) and female (40%). The majority of the subjects (89%) were Malays. Most of them (30.7%) earned between RM1,000 to RM1,999 per month followed by RM2,000 to RM2,999 (25.3%), less than RM1,000 (22%), above RM4,000 (15.3%). Most of the respondents were non-government (34%) workers, followed by government (33.3%), own businesses (14.7%) and 2% were labors.

Table 1: Socio-demographic Characteristics of the Respondents

Items	Percentage
Gender	
Male	60.0
Female	40.0
Age	
40-45	53.0
46-50	30.0
51-55	11.3
56-60	2.0
above 61	3.0
Race	
Malay	89.0
Chinese	7.0
Indian	4.0
Religion	
Islam	87.3
Buddhist	8.0
Hindu	2.0
Christian	2.7
Family Income in a month	
Less than RM1,000	22.0
RM1,000 to < RM2,000	30.7
RM2,000 to < RM3,000	25.3
RM3,000 to < RM4,000	6.7
Above RM4,000	15.3
Job	
Government	33.3
Non-Government	34.0
Labour	2.0
Own business	14.7
Other	16.0
Status	
Married	83.0
Widow	6.0
Widower	3.0
Polygamy	3.0
Unmarried	5.0
No. of children	
None	6.7
1-2	23.4
3-4	42.7
5-7	18.7
8-9	4.7
Above 10	2.8

## Types of Diseases

Overall, prevalence of poor health, heart disease, kidney, high blood pressure, diabetes and cancer came from those who were in 40-45 age group. Some of the most striking variations in prevalence of these health conditions by age and socio-demographic characteristics are highlighted below.

This study showed that only 14.2% respondents over 40 years of age were free from any disease. Overall, the occurrence of chronic diseases (heart, kidney, high blood pressure and diabetes) among men was higher (more than 50%) except for cancer (20%). Women had more cancer (80%), followed by high blood pressure (48.5%). This is supported by Chi-square test results which is significant (Table 2). Therefore, the first null hypothesis ( $H_{01}$ ) was rejected (Chi square = 13.847,  $p = <0.05$ ). It means that there is a relationship between types of disease and gender.

### CHD

Male adults aged 40-45 years had more heart related diseases and prevalence of this disease was very high (90.9%). It showed that Malays had more heart related disease (45.5%) while Chinese and Indian were equal (27.3%). Most of them were ranged in a medium income group (73.7%).

Table 3 shows types of disease by race whereby the second null hypothesis ( $H_{02}$ ) is rejected (p-value of Chi square test = 0.000, p-value  $<0.05$ ), thus we concluded that there is a relationship between types of disease and race of the respondent.

### Kidney

Prevalence of kidney problem among male was higher (87.5%) compared to female (12.5%). Most of them were Malays (75%) aged 40-45 years old. It was also found that those who were married; were more likely than the unmarried (12.5%) to have kidney disease. This disease was dominant among medium income group (75%).

We found that majority of the respondents, who have already contracted with CHD, have high blood pressure and diabetes do not smoke. 75% of those who smokes had kidney problem.

Table 4 shows the Pearson chi-square test of types of disease and smoking habit. The third null hypothesis ( $H_{03}$ ) is rejected (p-value of Chi square test = 0.023, p-value  $<0.05$ ). It therefore means that there is a relationship between types of disease and smoking habit.

### High Blood Pressure

It was found that male had higher blood pressure (51.5%) than females. When compared between ages, it was found that those who were from 40-45 years old (42.4%) had higher blood pressure followed by age ranged 46-50 years old (33.3%). Most of them were Malays (90.9%) from the medium income group (51.5%). Prevalence of high blood pressure was higher among married people (93.9%).

### Diabetes

76.5% male had diabetes. Prevalence of diabetes was the highest among adults aged 40-45 years (47%) and lowest among those 56 years and over (5.9%). It was also the highest among Malay adults (94%). The medium income group (58.8%) has higher possibility to have diabetes than the high income group (35.3%). The study showed that most of those who have contracted this disease are married (94.1%).

### Cancer

Females aged 46-50 years (60%) were more likely to have cancer than males. Most of them were Malays. Prevalence of cancer was high among medium income group (80%). Most of them were married (60%).

### Multiple Regression Analysis

For regression model, a stepwise multiple regression analysis was performed with the variable apprehension and awareness about health as the dependent variable. From the multiple regression analysis, test of overall significance was done and it was found that the full model was significant ( $F = 11.595$ ,  $p$  - value  $< 0.05$ ) and the null hypothesis ( $H_{04}$ ) was rejected. Thus, at least one of the variables makes a significant contribution to  $Y$ .

Table 5: Multiple Regression Analysis

Variable	Beta	t-value	p-value
Frequency of attack	-0.204	-2.074	0.040
Family disease	-0.173	-2.072	0.040
Obesity	0.213	2.741	0.007
Try to reduce illness	0.090	2.741	0.007
Take good food for the body	0.214	6.792	0.000
Practice healthy lifestyle	0.332	11.058	0.000

The result shows that there are six variables that are significant to health awareness. The variables that are significant to the dependent variable are 1) Frequency of attack 2) Family diseases 3) Obesity 4) Effort to reduce illness 5) Consume good food for the body and 6) Practice healthy lifestyle. The total explained variance (model  $r^2$ ) was 44.5%. It therefore means that, these six factors affect the health awareness by 44.5%. This shows that people who are concerned about their health will take suitable and good food, try to cure the disease, have frequent attacks or illness, are obese, inherit disease from family and practice healthy lifestyle.

### Discussion and Conclusions

Prevalence rates for many chronic health conditions were the highest for old adults. This study showed that those adults who are above forty years of age have almost all kinds of diseases up to the age of 61 and above. Age 40 to 60 years old and types of diseases was not related, meaning that adults above forty will contract the same type of diseases. This result supports the research done by Alwan (1993) and Hayes et al (2006) which claimed that old people are much more exposed to chronic diseases.

In terms of ethnicity, we found that the types of diseases are related to ethnic group, namely more Malays contract diabetes (94.1%) followed by high blood pressure (90.9%), cancer (80%) and kidney (75%). This is contrary to the findings by Khor and Gan (1992). This may be because the number of Indian sample for this study is small. Hence, further research, which includes more Indians, is suggested.

This research finding with regards to smoking habit and disease was supported by Kirkland et al. (1999) who revealed that smoking is a major cause of diseases. This study also showed that those who have family diseases are more concerned about their health. The more frequent these illnesses come to a person more concerned the person is about his health. This result supports the study done by Kirkland et al. (1999) and Farouq and Ahmad (1996).

To conclude, in an effort to realize the mission of the country to be a developed nation, various steps need to be taken to ensure the society's well being. This is not only in the area of economy or politics, but also from the social and healthcare area. To achieve the above objectives,

a high level of living style and healthcare must be created among citizens, so that, the country's social and economic development becomes more meaningful.

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**Appendix 1**

Table 1: Type of Disease and Gender

	Value	df	. Sig.
Pearson Chi-Square	13.847(a)	6	.031

**Appendix 2**

Table 2: Types of Disease and Race

	Value	df	Sig.
Pearson Chi-Square	35.281(a)	12	.000

**Appendix 3**

Table 3: Types of Disease and Smoking Habit

	Value	df	Sig.
Pearson Chi-Square	23.547	12	.023