

# PERCEPTION OF ADULT PATIENT TOWARDS THE IMPORTANCE OF PREVENTION OF CORONARY ARTERY DISEASE IN A PRIVATE HOSPITAL IN MALAYSIA

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## ABSTRACT

**Aim:** This study aims to determine the perception of adult patients towards the importance of prevention of coronary artery diseases (CAD) in order to raise awareness on the risk of CAD.

**Method:** 80 adults between 18 - 40 years old were enrolled in the out-patient department at a private hospital. The awareness and perception of the importance of preventing CAD were assessed using a questionnaire.

**Result:** The level of perception on the importance of prevention of CAD was quite good. 75% of the subjects (n = 60) recorded good level of perception meaning they are aware of the importance of prevention of CAD. 22.5% of the subjects (n = 18) recorded a satisfactory level of perception while only 2.5% of the subjects (n = 2) recorded a poor level of perception towards the importance of prevention of CAD. Majority of the subjects had good perception on importance of a balanced diet, exercise and active lifestyle.

**Conclusion:** In conclusion it can be said that although people are aware of the risk posed by CAD, recommendations such as proper health teachings and guide lines are still required to ensure that the community is able to understand the risk and take preventive measure in order to reduce the risk of obtaining the risk of heart disease.

**Keywords :** *Coronary artery disease, perception of Coronary Heart Disease, prevention of coronary heart disease.*

## INTRODUCTION

The World Health Organization (WHO) (2010) has ranked Malaysia as the sixth in Asia and first in South-East Asia for adult obesity with 60% of adults over 18 years old with a body mass index of over 23 which categorize them as being overweight. This suggests that Malaysian adults are living an unhealthy lifestyle which makes them prone to illnesses especially coronary artery diseases.

Coronary artery disease (CAD) is the number one killer in the whole world. Importance of coronary heart prevention begins with maintaining a healthy weight. Excess weight raises blood cholesterol, triglycerides, blood pressure and lowers HDL cholesterol. It also elevates the risk of diabetes and hypertension. According to King & Arthur, 2003, the empirical literature is abundant with evidence that modifying

particular behavior prevents CAD. We know that behaviors such as smoking, high consumption of fat and low-fiber diet, engaging in a sedentary and stressful lifestyle are risk factors for CAD. According to Artalejo and Banegas (2004), uncontrolled alcohol and salt consumption, increase in blood pressure and body weight, are among the risk factors of developing cardiovascular diseases. Furthermore, once a diagnosis or event has occurred, it is clear that attending to CAD risk factors reduces the risk of recurrence and mortality. Hence, efforts to better design cardiovascular risk factor and control strategies could aid people in taking early preventions of CAD.

The most important aspect of preventive measure is finding the root that may cause or arise and also taking into consideration the current lifestyle of many adults. According to Centers of Disease Control and

Prevention (CDCP) (2014), prevention should be woven into all aspects of our lives, including where and how we live, learn, work and play. The key is to reduce the risk of developing the disease. When an adult is aware of the importance of health, they will be able to take action which will lead to the prevention of illnesses and maintenance of their well-being. Apart from that, with knowledge of early prevention of illnesses, the risk of obtaining CAD and other related disease can be prevented and reduced at an early age.

This study aims to determine the perception of adult patients in a private hospital in Malaysia towards the importance of prevention of CAD in order to raise awareness on the risk of CAD.

**METHOD**

This is a cross-sectional, descriptive study. This study focuses mainly on the awareness and perception of the importance of preventing CAD among adult patients.

The research instrument of this study is a self-developed questionnaire which is self-administered and is designed to measure variables. The questionnaire was given to 80 adults between the age of 18 and 40 years old in the outpatient clinic in a private hospital. The questionnaire consists of two parts which is divided into section A and B. Section A consists of the participants' demographic data while section B determines the level of the participants' understanding and their perception towards the importance of prevention of CAD through statements which is related to methods of prevention of CAD. The questionnaires are in dual language, English and Bahasa Malaysia.

Section A consists of 6 items comprising of age, gender, race, education level, family history and occupation. This section is to identify what are the participants' personal details. Section B consists of 15 items that are related to participants' understanding regarding the importance of preventing CAD. This section includes statements pertaining to knowledge for the prevention of the risk of CAD along with healthy lifestyle and dietary habits which may assist in preventing CAD, and also statements regarding certain diseases which may lead to CAD. This helps to determine the level of perception and understanding of the participants towards the importance of prevention of CAD. The items used are: 5-point Likert scale

format that consists of 1 = Strongly Disagree, 2 = Partially Disagree, 3 = Undecided, 4 = Partially Agree and 5 = Strongly Agree. A total score of 15 - 35 indicates poor level of perception; 36 - 55 indicates satisfactory level of perception while a score of 56 - 75 indicates good level of perception.

**RESULTS**

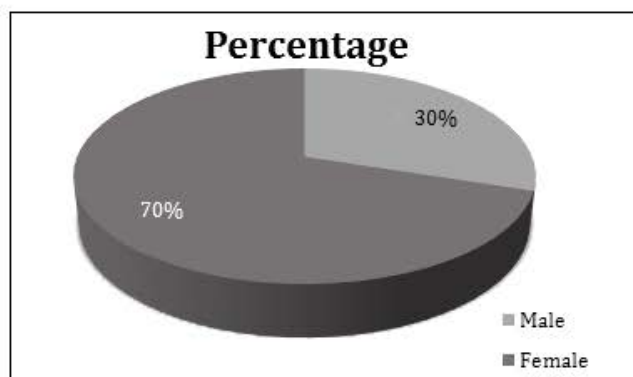
The mean age of the participants enrolled into this study was 27±20.8 years old (Table 1).

*Table 1: Age distribution of subjects (n=80)*

Age Distribution		
	Frequency	Percentage (%)
18 - 20	10	12.5%
21 - 30	50	62.5%
31 - 40	20	25%
<b>Total</b>	<b>80</b>	<b>100%</b>

More than half of the participants' were female (70%, n = 56) (Figure 1).

**Figure 1:** Percentage of gender distribution (n=80)

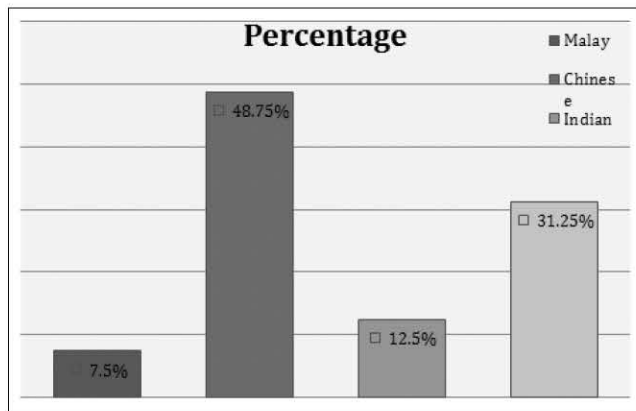


Majority of the respondents were Chinese (48.75%, n = 39), followed by Others (31.25%, n=25), Indians (12.5%, n=10), and Malays (7.5%, n = 6) (Figure 2).

**Figure 2:** Percentage of race distribution (n=80). The ethnic with the most number of the subjects in this study were the Chinese with 39 subjects with a percentage of 48.75%, next were 'others' consisting of races such as i.e. Iban, Bidayuh, Kadazan, Indonesians etc with a subjects count of 25 and a percentage of 31.25%. Rounding up the count was the Indians with a percentage of 12.5% with 10 subjects, and lastly the

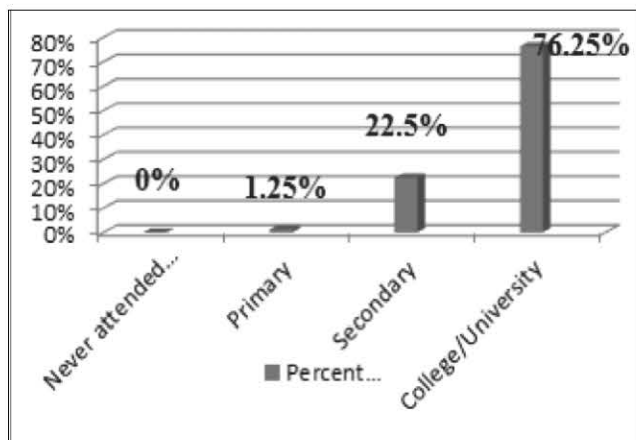


Malays with a percentage of 7.5% which is 6 subjects adding up a total of 100%.



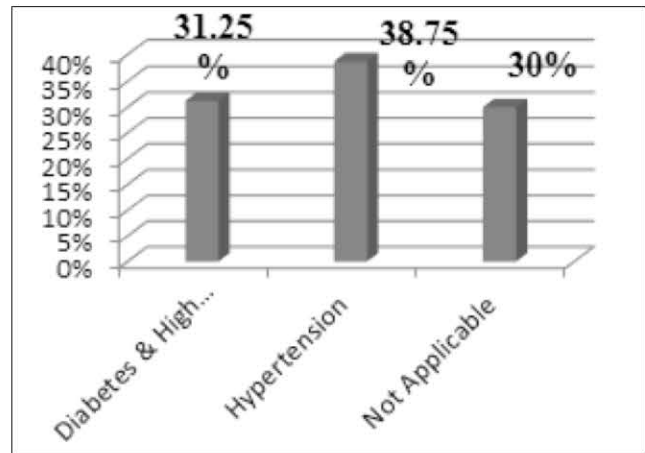
As for educational level, 76% of the participants had attended college and university, 22.5% completed secondary level education while only 1.3% completed primary level education (Figure 3).

**Figure 3:** Percentage of educational level of the subjects' distribution (n=80)



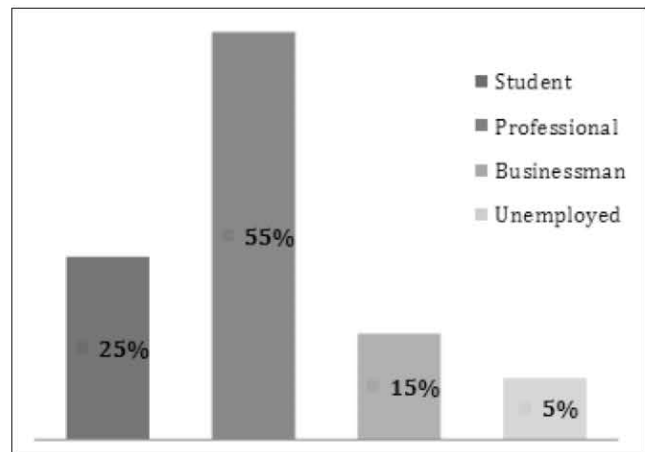
82.5% of the participants (n = 80) had family history of diseases such as hypertension, diabetes and high cholesterol while 17.5% of participants (n = 80) did not have any family history of diseases (Figure 4).

**Figure 4:** Percentage of family history distribution (n=80). The family history segment indicates that 31 subjects out of 80 subjects has family history of Hypertension (38.75%), 25 subjects out of 80 subjects have family history of both Diabetes and High Cholesterol combined respectively (31.25%) while 24 subjects out of 80 subjects wrote not applicable (30%) and did not have any family history bringing a total of 100%.



Majority the participants were working as professionals (53%), students (23.8%), businessman (13.8%) while only a small group were unemployed (8%) (Figure 5).

**Figure 5:** Percentage of subjects' occupation distribution (n=80)



Overall, the level of perception among the participants on the importance of prevention of CAD was quite good. 75% of the participants (n = 60) recorded good level of perception, implying that they were aware of the importance of prevention of CAD. 22.5% of the participants (n = 18) recorded a satisfactory level of perception while only 2.5% of the participants (n = 2) recorded a poor level of perception towards the importance of prevention of CAD.

Most participants strongly agree and have good perception on statements related to dietary habits. Majority of the participants agreed that reducing fat intake (M = 4.1), having a whole grain diet (M = 4.1), maintaining a balance diet (M = 4.3), consuming a

higher constitutes of boiled food instead of fried foods ( $M = 4.3$ ) and opting for home cook food instead of eating out ( $M = 4.3$ ) could help in the prevention of CAD. The respond of the participants towards sugar intake ( $M = 3.7$ ), salt intake ( $M = 3.9$ ) showed that the participants agree that reducing the intake of these two food groups can help lower the risk of CAD. Apart from that, most participants also agreed that eating food which is high in Omega 3 can also help reduce the risk of developing coronary arterial disease ( $M = 3.9$ ). Minority of the participants either disagreed or was undecided towards the statements related to sugar, salt and omega three intakes and the process in which these foods help to prevent CAD. Besides that, most participants have a good perception on the importance of reducing the amount of fat intake ( $M = 4.1$ ). Participants strongly agree that high cholesterol is a risk factor for developing heart disease ( $M = 4.2$ ).

Most participants partially and strongly agree that exercise ( $M = 3.9$ ) and an active lifestyle ( $M = 4.0$ ) could bring changes and also prevent the risk of developing CAD. A majority of the participants in this study strongly agree with the statement that smoking can lead to heart problems ( $M = 4.3$ ,  $SD = 0.98$ ).

## DISCUSSION

The aim of this study was to determine the level of perception and to create awareness towards the importance of preventing CAD. The perception level is assessed to identify the awareness level in order to map strategies for health promotion. Overall, this study identified that the level of perception among the participants on the importance of prevention of CAD was quite good.

Most participants in this study had good perception on the importance of good dietary habits. Minority of the participants either disagreed or was undecided towards the statements related to sugar, salt and omega three intakes and how it helps prevent CAD. This finding can be attributed to lack of knowledge on dietary intake for those who disagreed and should be educated by structured health teaching, while those who are more educated and are health conscious and seem to understand that reducing sugar and salt while consuming more omega 3 is better for the heart. It is best for adults to implement diet with low salt, fat and sugar.

It is been confirmed by Keville (2001) that

cholesterol is found in food from animals (such as milk, meat, fish and eggs), but our liver also makes cholesterol in its production of adrenal hormones. Unfortunately, it also causes build-up of bad Low-density lipoprotein (LDLs) and it contributes to hardening of arteries and blood clots, which in turn can lead to heart attack. These conditions diminish blood flow and cause blood pressure to rise as the heart struggles to pump blood through narrowing passages. This is evidenced through a previous study done by Holmberg, Thelin and Stiernstorm (2009). Daily intake of fruits and vegetable has been associated with lower odds of CAD in this crude analysis. According to Wilkins, *et al.* (2014), the level of perception towards the importance of prevention of CAD is low as patients are still unaware that high cholesterol could increase the risk of developing CAD. This proves that, the respondents who participated in our study were aware that high cholesterol level is a risk for developing CAD.

Another common risk factor for the development of CAD is being overweight or obese. Although the findings in this study showed that most of the participants have good level of perception and agree that overweight and obesity is a risk to developing CAD ( $M = 4.1$ ,  $SD = 1.10$ ), they may not be aware of how they are able to prevent the risk factor of overweight from occurring.

Overweight and obesity pose as a major risk factor for a number of chronic diseases and CAD is one of them. A previous study conducted by Ng, *et al.* (2014), found that Malaysia was rated highest among Asian countries for obesity. The study showed that at least 49% of female and 44% of male in the country were found to be obese. Besides that, according to the study, 45.3% of the population in Malaysia was rated heavyweight, followed by South Korea (33.2%), Pakistan (30.7%) and China (28.3%). Furthermore, a study by World Health Organization in 2014 stated that Malaysia has the highest obesity rate in Southeast Asia at 44.2% compared to their other Southeast Asian counterparts. A recent study conducted by Dietz, *et al.* (2015), stated that through increased awareness, policy and environmental approaches, reduction in the prevalence of obesity in some countries have been achieved. But with these methods, it is still insufficient to achieve weight loss among those who are of severely obese. Therefore innovative treatment and also care



delivery strategies are needed.

The results of the study done by Dietz, *et al.* (2015), showed that with the proper innovative treatment and care delivery strategies to curb obesity, about 19% of adults and 24% of parents would avoid further medical appointments in order to treat overweight and obesity. It is the responsibility of the health giver to promote and instill awareness into the community regarding the importance of their health. This in turn will help to change the community's perception towards the importance of preventing risk factors which may bring about diseases and illnesses which may affect a person's well-being.

Lifestyle can have a major impact in a person's health and well-being. In this study, most of the participants partially and strongly agreed that exercise and an active lifestyle could bring changes and also prevent the risk of developing CAD. This showed that the participants are aware that exercise is of high importance. Another study by Muhamad *et al.*, (2015), physical activity or exercise does help in reducing the risk of CAD whereas reduced physical activity is a major risk factor for CAD. A study of the associations between physical activity and risk of cardiovascular disease among 44,551 middle-aged men found vigorous and moderate-intense activity were associated with lower risk of developing CAD. Apart from that, majority of the participants in this study strongly agree with the statement that smoking can lead to heart problems ( $M = 4.3$ ,  $SD = 0.98$ ). This showed that the participants' level of perception is that smoking could lead to heart problems which is well justified. However, the awareness and level of perception of links between smoking and heart problems such as CAD remains low in many part of the world (WHO, 2012). According to Peltzer, *et al.*, (2014), the link between smoking and heart disease was 46.5% and therefore half of the population was only aware that smoking could lead to CAD. This also showed that the perception of level of prevention of CAD by reducing smoking was only satisfactory. Steptoe *et al.* (2002), also states that the awareness of smoking being linked to heart diseases was relatively low and their level of perception towards the importance of prevention of CAD by carrying out health promotion methods such as reduction or stopping smoking was low and poor. Participants in this study showed that a majority of

them strongly agree with the statement that smoking can lead to heart problems. They are aware that cessation and not smoking can help to reduce the risk of developing coronary heart problems. Through the health promotion, it can help increase the awareness in the younger generation that smoking could lead to CAD later in life thus improving their level of perception towards the importance of prevention of CAD at an early age. According to National Heart, Lung and Blood Institute (2015), parents play a dominant role in encouraging their children at an early age to either stop or avoid smoking and make healthy choices that are best for the heart

The findings of this study can be utilized in the area of nursing practice, administration, education and research. In nursing practice, the findings of this study highlighted that majority of the participants ranging from 18 to 40 years old have a good level of perception towards the importance of prevention of CAD. However, there are still a small number of participants who are uncertain regarding some of the statements on the methods of prevention of CAD. Therefore, it is relevant that the nurses provide adequate information to improve the knowledge of the participants. As the participants are aged between 18 to 40 years old, it is easier to provide teachings and information regarding the importance of prevention of CAD, as they are more knowledgeable and more understanding than elderly patients. Also, by carrying out health teachings, nurses are also instilling a health promotion attitude and behaviour in the patients. This in return, will help mould a health conscious mind set in the patients and strengthen their determination to ensure a healthier lifestyle and maximized well-being at an early age in order to prevent the development of CAD or any other chronic illnesses in the future. Hence, nurse-patient relationship should be enhanced to ensure that healthy lifestyle behavioral changes are incorporated among the CAD patients.

For the nursing administrative side, this study will help to guide the nursing management in developing an improved health education policy on prevention of CAD which could be delivered to both CAD patients and also patients without history of CAD especially the younger generation of patients. With better health education policy, it will in turn assist the nurses to improve in health teaching delivery system by



providing sufficient and relevant health teaching to the patients. Every hospital have a framework based on a nursing model to carry out nursing care and the nursing administration could implement the Pender's Health Promotion so that nurses could help patients achieve maximal health through health promotion and teachings which could lead to healthy behavioral changes in the patients and make them more aware towards the understanding of the importance of prevention of chronic diseases.

Nurses are involved in the education of patient disease process, health promotion, involving in clinical procedures and managing the nursing process. Patient education is a fundamental role as this standard of nursing practice meaningfully impacts a patient's health and quality of life. Nurses should identify patient's needs and then formulate education plan that is appropriate to them. Aghakhani, *et al.*, (2014), stated that process of education are described in four steps. Firstly, determine patient level of knowledge, misconception, learning ability and learning styles. Nurses should assess patient's knowledge and finding appropriate method to teach by using education pamphlets, video or other education method that will enable to attract patient's attention in the learning process. Following these steps will help to understand patient barriers and the learning need can be diagnosed. This denotes that communication plays an important role to convey information that will trigger to improve patients health outcomes. Thirdly, the education goals

must be planned to deliver teaching. In this phase, nurses should analyze the type of education that is appropriate, based on the level of knowledge and the nurse should organize the process of education. Last but not least, to evaluate patients' knowledge it is important to give the patients questions to answer as this determines the level of understanding that patient has gained.

There were some limitations in this study. Primarily, it is due to the small sample size as this study was conducted in a one location in a single private hospital. Due to this, it has limited the generalization of the findings for this research work.

## CONCLUSION

This research study promotes health education as a major components to increase level of perception and knowledge of adult patient. Perhaps, it is important to apprehend knowledge by creating understanding to encourage a quality and a healthy lifestyle. The finding reveals that education level of adult patients clearly plays a key part and indicated the level of perception towards importance of preventing heart disease. Health promotion should be directed towards modification of the lifestyle and to improve lives by having optimal health. Health education is a step to increase and enhance level of perception of knowledge to promote an excellent health, to prevent disease by reducing the mortality and morbidity rate.

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