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CHE IBRAHIM AZHANI ¹, YUSOF YUSMARWATI ², POH KEONG PUA ³

^{1,2,3} University Tun Hussein Onn, Malaysia

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THE IMPORTANCE OF BALANCED DIET FOR THE HUMAN CAPITAL FORMATION ON PHYSICAL AND MENTAL FITNESS

CHE IBRAHIM AZHANI ^{1*}, YUSOF YUSMARWATI ², POH KEONG PUA ³

^{1,2,3} University Tun Hussein Onn, Malaysia

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Abstract. In order to achieve the status of a developed nation, first class mind of human capital is an important asset to the country. In moving towards an era of globalization and modernization, human capital should be knowledgeable, confident, dynamic, innovative, creative, as well as physically fit and active. Balanced diet can have a positive impact on productive workforce and helps them meeting the criteria of the first-class minds which are working towards agility, accuracy of work and employment success. Such minds lead to the achievement of high income, good health and the formation of values and good habits that give prosperity to one's life. Thus, a lifestyle with a balanced diet is one important element in maintaining the health and vitality of human capital. Physical and mental human development was also influenced by the type and pattern of their diet. A balanced diet is a practice that is important for maintaining mental and physical health for a long time. Apart from maintaining mental fitness, healthy diet can also prevent individuals from chronic diseases such as diabetes, obesity and heart problems. Therefore, this paper discusses the importance of balanced diet for human capital formation covering aspects of physical and mental fitness as well as forming a community of excellence in education and social lifestyle. In this study, research will be conducted by using an observation in the defined population, as well as survey with questionnaires that will be distributed to students at four technical universities in Malaysia. It is hoped that this research study could serve as a guideline for university students in managing their diet style, hence, constituting a vibrant human mental and physical labor equipped with first-class minds.

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INTRODUCTION

Excellent human capital development with mental and physical fitness is very important to create the productive assets for the country. Malaysia is now in the journey towards achieving Vision 2020 in which our country will become a developed country in a holistic manner. One emphasis in the National Mission is the development of human capital for the country's future success that is dependent on the quality of its human capital either intellectually or with respect to the personality. This is in line with the National Philosophy and national educational goals which is to produce a balanced and harmonious human capital in terms of intellect, spirituality, emotional stability and physical strength as well as by faith and obedience to God (Mohamad, 2009).

In producing a balanced and harmonious life style, one important factor is healthy food and balanced diet. Food is a basic need for human beings. It affects most of the human life, including their lifestyle, culture and economy. Based on scientific evidence, there are three branches of food including nutritional sciences (preparation, preservation, safety and quality), substance (food efficacy in improving human health and nutritional studies

(optimum nutrition management) (Rahman, 2011). In today's life, a balanced diet is essential to ensure the consistently healthy life that eventually could prevent individuals from any diseases. According to Embleton, Pang and Cooke (2001), nutrition is an important component for development and human growth. According to the professionals, with more detailed evaluation of the nutritional needs of the body, it can contribute towards optimal development of the human body, intellectual development, and thus overall health conditions.

Healthy food consumption should be started from an early childhood stage because it will affect the lifetime of individuals. With reference to the medical evidence, the lack of iron in the body can cause anemia, obesity, eating disorders and oral problems. Healthy eating habits during childhood can also affect a particular individual's risk for cardiovascular disease, stroke, cancer, and the possibility of other chronic diseases (US Department of Health and Human Services, USDHHS, 2000). The practice of healthy eating as well, it help avoid the problem of obesity, which is one of the main factors contributing to health problems among most people,

*Corresponding author: Che Ibrahim Azhani

E-mail address: azhaniphd@yahoo.com.my

including students. In the early stages of the education, the provision of a healthy diet is necessary to supply students with nutrients that are essential for physical and mental development leading to an active and intelligent mind. The fulfillment of the nutritional needs of the body can help them stay fit and active, and thus help them to think creatively and critically. At this stage, students should be introduced to a balanced diet menu for adjusting them to healthy eating habits. Positive perceptions of students about healthy food must be nurtured in the first instance. Besides that, the food served in the university area must also meet health standards and should be balanced in terms of nutrients to meet the needs of the students for promoting the learning process. By fulfilling the requirements of proper nutrition, it could help students to have a good learning process. Adequate nutrition can help students to think smarter and increase concentration in class. Students who lack certain nutrients in the diet for example, iron, iodine, protein etc. do not have the same concentration for learning as compared to the students who have more balanced diets. This is because the content of food consumed would be able to affect mental and physical health of the individual (Thompson, & Govindji, 2009).

In this study, the emphasis is focused on the physical and mental development of a student which generally are influenced by eating habits. The future focus in Malaysia is to produce skillful human resources. Therefore, the university as one of the institutions that produce human resources, is seen as a suitable place to educate the new generation about eating healthy diet. Hereinafter, it is necessary to understand the eating habits and the diet among students in the university to promote a healthy student life and encourage a good learning process. Hence, this study will choose the Malaysian Technical Universities (MTUN) as the location of the study, which include Universiti Tun Hessein Onn Malaysia, Universiti Teknikal Malaysia, Universiti Malaysia Perlis and Universiti Malaysia Pahang.

Thus, the objectives of this study are to:

- Identify balanced nutrition policy practiced by cafeterias in the Malaysia Technical Universities (MTUN).
- Identify the practical guidelines by university administration and cafeteria management towards healthy eating style.
- Identify the influence of diet on the development of students' physical and mental fitness in Malaysia Technical Universities (MTUN).
- Identify the relationship between healthy diet and the mental and physical fitness of students.

REVIEW OF LITERATURE

Human Capital

Human capital is defined as the characteristics of workers that make them more productive. This capital could not be transferred from one person to another but someone needs to invest to get it (Hamat and Che Nordin, 2012).

It was formed or created through investments in education, training before work, job training, health, migration and the search for information that can improve a person's quality of life. The present value of such investments can determine the level of human capital that exists in an individual person.

According to Schultz (1971), there are five categories that can be focused in enhancing human capabilities, in turn to produce human capital, namely:

1. Health facilities and services
2. On-the-job training
3. Provision of formal education at the primary, secondary and tertiary levels.
4. Learning programs for adults
5. Migration of a person or family to get better career opportunities.

The third item has mentioned that the formation of human capital, includes the provision of formal education at the primary, secondary and tertiary levels. The development of human capital with excellent mental and physical capabilities is very important to create the country's productive assets. Food is found as one of the fundamental factors in human development which is also mentioned as the first element in the list above. Therefore, a healthy food consumption is fundamental in shaping the mind and physique of children. One element that should be concerned in healthy food is nutrition.

Nutrition

Nutrition are substances that are needed to live and grow or a substance used in an organism's metabolism which must be taken in from of its surroundings. It is used to build and repair tissues, regulate body processes and is converted and used as energy. There are different methods of nutrient consumption. Animals eat food that is digested by an internal digestive system, but most plants absorb nutrients directly from the soil through the roots or from the atmosphere (Whitney, DeBruyne, Pinna, & Rolfes, 2010).

Whilst, in the development and growth of human, the human body operates as a complicated machine and functions depending on the different chemical reactions. Chemicals that help the body processes can be found in the food consumed. These chemicals help to produce nutrients (Caunii, Cuciureanu, Zakar, Tonea, & Giuchici, 2010).

Nutrients taken should be balanced to ensure the good diet and healthier life. Nutrients include carbohydrates, proteins, fats, fibers, water, vitamins, and minerals. All these classes will be the contents in daily foods served either individually, in combination or may include all the seven classes. Poor health may be the result of either not enough or too much of a nutrient, or some nutrients - an imbalance (Nordqvist, 2014). Therefore, balanced diet is important to human body in keeping a good physical and mental health.

Balanced Diet

A balanced diet is essential for the growth and development of infants and children. A good practice of healthy diet is important, regardless of age and level of intelligence (Ministry of Health, 2012). According to studies, obesity among children is a general health problem in Malaysia that needs to be addressed immediately (Soo, Manan, Manaf, & Lee, 2011). This situation, more or less could give a negative impact on children, especially the level of concentration of children who are learning in the

classroom, which could lead to the problem such as less activity and so on.

To help identify healthy food and balanced portion of food to be taken, the food pyramid is a guide that is easy for people to understand the balanced diet. The pyramid is illustrated as Figure 1. The right decision with the recommendations from the food pyramid can contribute to balanced nutrition menu which indirectly, helps towards healthy physical and positive mental development (Ministry of Health, 2010).

FIGURE 1
The Food Pyramid, Ministry of Health Malaysia 2012

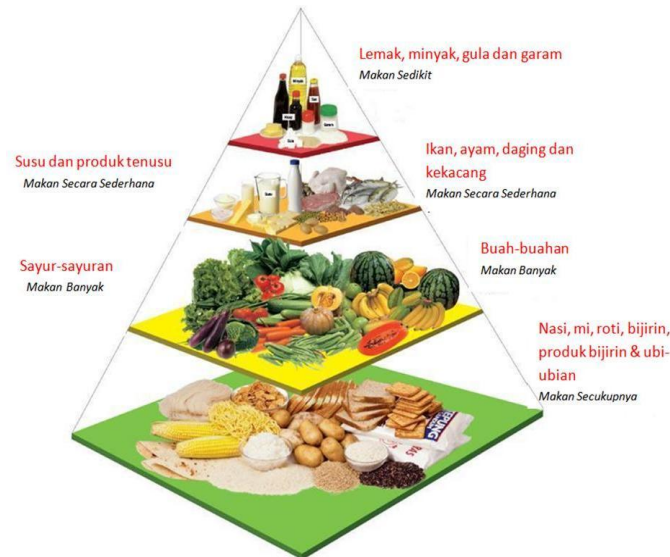


Figure 1 shows the food pyramid that could guide users to choose right menu for their daily diet with balanced consumption of food from each category (level). The lowest level is carbohydrates as the main group that supplies 50% to 55% of total daily energy. The second level is comprised of fruits and vegetables which are good sources of fiber, vitamins, minerals and phytochemicals that help to strengthen resistance against diseases (immunity). Level three indicates a good source of protein needed to build body and rich in B vitamins, iron and zinc. The top level which is level four shows these foods should be taken in small quantities only. Excessive consumption can increase the risk of chronic diseases such as obesity, diabetes, heart diseases and high blood pressure (Mowat et al., 2011)

Consumption of foods based on the food pyramid and in accordance with the right composition can help to practice a healthy eating habit and balanced diet. There are many benefits of healthy eating habits. Among them, it could help to improve students' performance in their learning such as concentration in the classroom and increase comprehension and memory (Govindji et al., 2002). In addition, physical and nutritional conditions could also influence a person's appearance (Blades, 2001), and most

importantly, it significantly could affect the health of a person (Rahman, 1999).

In daily life of a student, taking a balanced diet and systematic eating schedule with consistent healthy food is important to ensure the mental and physical health (Abdullah, & Ali, 2011). Maintaining and controlling eating habits with a balanced diet can ensure good health and an active mind. Meals that are consumed would affect the thinking process and minds of students. If food taken is balanced, students can learn easily without being disturbed by any health problems (Tajul Ariff, Soelaiman, Pramanik, & Shuid, 2012). Hence, the Ministry of Health, as well as Ministry of Education have taken few steps to ensure the implementation of the healthy food in the schools' canteens. This effort is considered as a step to promote balanced diet among students (Marquart, 2011), and it should comply to university cafeterias as well.

Based on studies before, there are several factors that affect the type of diet for university students. According to Abdullah and Ali (2011), factors that influence eating practices of university students staying on campus is the financial status of the students and their dining routine. Less emphasis has been placed on

balanced nutrition by the operators of the campus cafeteria who gear towards promoting unbalanced diet among students. Awareness of the diet should also be in focus point by the university administration to provide guidance regarding food on campus so that a healthy and balanced diet is served to the students.

Accordingly, this research is expected to create awareness among the university administration and food operators to follow healthy eating guidelines planned by the Ministry of Education and Ministry of Health. It could help to produce a balanced menu and healthy food in cafeterias and universities to be served and sold to students and staff. This ambiance could create positive perception among students about healthy food menu, where students can adopt the types of healthy food, gradually choose to continue healthy eating habits and manage their diet.

RESEARCH METHOD

In this study, an observation will be done in the defined population, together with the set of survey questionnaires which will be randomly distributed to the students at four technical universities in Malaysia. Those universities are Universiti Tun Hussein Onn Malaysia, Universiti Malaysia Perlis, Universiti Malaysia Pahang, and Universiti Teknikal Malaysia.

At the early stage, preliminary observations in the university cafeteria will be conducted to assess the menu and nutritional content of the food served. Following that, the study will propose a menu of healthy food to be served at the university cafeteria. After few weeks, a questionnaire will be distributed to a sample.

A questionnaire is an instrument that is commonly used in a survey research design (Ghafar, & Najib, 2003). Two sets of questionnaire will be administered before (pre) and after (post) the introduction of a Healthy Food Menu. The pre and post questionnaires are helpful to identify any differences of mental and physical health after the introduction of the menu.

CONCLUSION

Excellent human capital development of mental and physical fitness is very important to produce the country's productive assets. Food is one of the fundamental factors in human development that helps the healthy development of human capital in terms of physical, emotional, spiritual and intellectual growth. Therefore, a balanced diet is essential for the development of physical and mental capabilities of students in shaping the next generation with first-class minds, as well as forming a community of excellence in education and social life. Accordingly, this study is hoped to provide a guidance or reference to the Ministry of Education in the governance of food preparation in educational institutions throughout Malaysia. This study can also bring awareness to the students and universities, as well as the food operators to be more concerned in food preparation in order to protect the health of the students, which indirectly could also affect students' learning process in the classroom. In addition, the university students, as one of the main sources of human capital, are being hoped to manage their diet style, hence, constitute a vibrant human mental and physical labor to meet the criteria for having first-class mind.

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