*Research Article*

# A Study of Knowledge, Awareness and Action Towards Healthy Food Intake Among Higher Education Institution Students

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## ABSTRACT

Healthy food intake is essential for good health and nutrition. It protects against many chronic non - communicable diseases, such as heart disease, diabetes, and cancer. Eating various foods and consuming less salt, sugars, and saturated and industrially produced trans-fats are essential for a healthy diet. This study aimed to examine a study of knowledge, awareness, and action toward healthy food intake among higher education institution students. The researchers used a quantitative technique and questionnaires by Google Forms to conduct this survey. A Statistical Package Social Science (SPSS) version 26.0 was used to analyse the data. The findings showed that knowledge and awareness had a relationship with a p-value of 0.000. The result indicated a significant relationship between knowledge and awareness of healthy food intake. There are a few recommendations related to the study proposed by the researchers.

**Keywords:** Knowledge, Awareness, Healthy Food Intake

## INTRODUCTION

Food and nutrition literacy are crucial challenges in ensuring the food system's long-term viability, which has a significant impact on public and environmental health. It is because of their importance to human health; the concepts of food literacy and nutrition literacy have only lately been defined. Adolescent health is influenced by childhood happiness, and it sets the tone for material and adult health (Vidgen & Gallegos, 2014). Diet and physical activity are two important parts of a wealthy society's lifestyle that increase the risk of serious diseases, including cancer and coronary heart disease. Early in life, lifestyles and health ideas appear to be established, laying the groundwork for subsequent years. As a result, it is critical to keep an eye on changes in university students' health behavior and to understand what factors, such as risk knowledge and attitudes, may influence their adoption of healthy habits. University is a

critical time for students to change their bad eating habits. Obesity and overweight, as well as the illnesses that go along with it, have become a global issue. (Chelsey R Canavan, 2019).

It appears to enhance the chance of weight gain based on how it interacts in addition to these other risk issues such as poor diet as well as an inactive lifestyle. This research sought to classify the major of awareness, knowledge, and action toward healthy food intake among higher education institution students. Emotional eating is the tendency to overeat in reaction to emotions such as stress, sadness, boredom, anxiety, or irritation. One factor why emotional eating may rise in stressful conditions is that some people may use food to deal with emotion rather than the more adaptive means of controlling their emotions (Cunliffe, 2020).

The objective of this study was as follows;
1. To identify the knowledge of healthy food intake practices among higher education institution students.
2. To investigate the relationship awareness of healthy food intake practices among higher education institution students.

**Significance of the Study**

Based on this study, food awareness and action are in the direction of a healthy diet. Besides, given the knowledge and awareness about a balanced diet were investigated. This allows them to gain more knowledge about healthy food intake. Thus, people could spread knowledge and put action to all the students and close acquaintances to share information about healthy balanced, diets and maintaining proper nutrition. It also could help individuals to maintain their body weight by maintaining a balanced diet and avoiding obesity.

Furthermore, this study could be used as a valuable reference for future researchers. This may become a second tool for future researchers. The investigator needed to explore and understand more about healthy food intake and its advantages. A future investigator could use this study to gain more information and knowledge in future studies about awareness and action toward healthy food intake whether increasing or decreasing.

**LITERATURE REVIEW**

**Knowledge**

Knowledge is part of the reality of knowing indirectly or indirectly. Knowledge is also said to be a cognitive relationship with reality for a person. Knowledge is called based on reality because it is from everyday experience and contact. Knowledge through introduction not only encompasses people, animals, and things but however, knowledge of see's own mental health (L Zagzebski, 1995). The field of subjective well-being growth in the field of swabs reflects larger societal trends concerning the value of the individual, the importance of subjective views in evaluating life, and the recognition that well-being necessarily includes positive elements that transcend economic prosperity.

Subjective health complaints depended on interactions between demands and coping, more than demand and control. The combination of high demands and low coping was associated with most health problems, whereas low demand and high coping had the lowest level. It is well known that stress may exacerbate gastrointestinal symptoms and complaints. When expectancies were positive, high demands are no health risk in healthy organisms. Negative effects occurred only when there was a lack of coping. This suggests that lack of coping with stress, meaning low expectancies of the outcome, plays an important role in patients with subjective health complaints (R. Lind, 2005). To explore the hypothesis that this effect can be explained largely by individual differences in the degree to which some people were apt to be more under normative control, subjects were asked to indicate their intentions, attitudes, and subjective norms toward performing 30 behaviours. Between-subjects and within-subjects analyses were performed. The within-subjects analyses revealed important differences in whether subjects are under attitudinal or normative control across- the behaviours.

There are similarities between it and subjective food of hypersensitivity that should be investigated further. There are several reasons why patients attributed their health complaints to food. It was, first, easier and more acceptable to present somatic complaints, rather than feelings of sadness or depression, and avoid being labelled psychologically disturbed. In fact, patients were often hostile to the idea that their symptoms had a psychological explanation, and they seemed to grasp any possible organic explanation for their symptoms. Several meals during the day create many possibilities for random coincidence and wrong attribution between food intake and pain. Wrong attribution may also be ascribed to "associative learning" or influence. Occasionally, healthcare workers, friends, and therapists in the field of alternative medicine offer "good advice" that may be wrong. In our health region, patients with gastrointestinal problems are often told to avoid having milk and wheat in their diet. The high prevalence of suspected adverse reactions to these food items might be the result of this local influence (C Trafimow, Krystina, 1996).

**Awareness**

The importance of political awareness among the people and it depends on the level of awareness of the people to bring positive influence. (Carl Görtz, 2021). Health awareness among married, adolescent, and highly educated people. Most of these categories have a normal and balanced BMI compared to those who are not from this category. (Ammal M, 2021) Health awareness among married, adolescent, and highly educated people. Most of these categories have a normal and balanced BMI compared to those who are not from this category (Ammal M, 2021). Seniors lack awareness about healthy eating, health care and healthy lifestyle practices that make them vulnerable to deadly chronic diseases. Studies have found that most senior citizens die in their early 50s, this is due to the lack of health awareness among the elderly.

Awareness of physical activity since school age and early adolescence can cultivate a daily routine to do physical activity from an early age that leads to a healthy lifestyle. (Magid Taheri, 2013) The nutritional evaluation of food products initially offered in VMs was in line with the few previous studies that quantitatively evaluated the nutritional quality of food products. However, the product replacement was successful in increasing healthy positive and healthy

negative product sales while decreasing unhealthy options. (Alice Rosia, 2016)

The importance of consumer awareness as an antecedent of knowledge of functional food ingredients for healthy food choices, the aim of this study is to explore consumers' ingredient awareness and the determinants influencing it (Sabine Bornkesselab, 2014). The consumer's ingredient awareness showed low influences, the effect size for the predictor's age and health status did not show a relevant influence on education, health status, health motivation, and information strategies (Sabine Bornkesselab, 2014). Awareness of young adults back to start a healthy lifestyle once more and improve the connection between the foods they feed into the body, including habits and ways of eating with a healthier lifestyle and balanced nutrition (Sabine Bornkesselab, 2014).

**Research Hypothesis**

The hypothesis for this research is to see if there are any significant differences between the independent variables and dependent variables: -

H1 : There is a connection between knowledge and healthy food intake among higher education institution students.

H2 : There is a connection between awareness and healthy food intake among higher education institution students
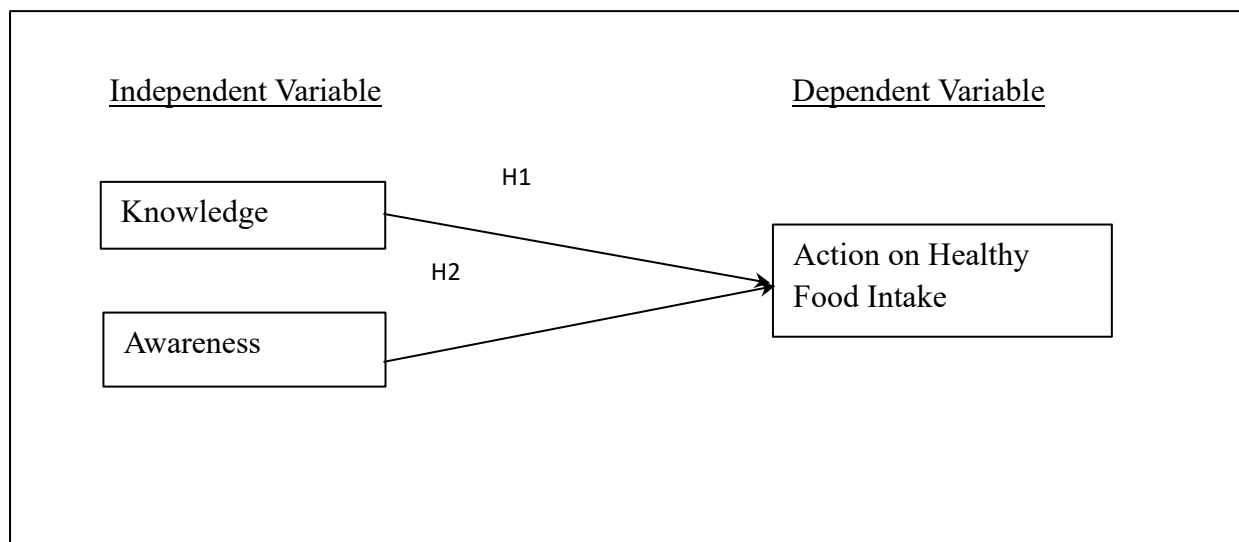
**Research Framework**



Figure 1: Research Framework

## METHODOLOGY

### Research Design

Research design is a part of a plan that will identify the method and procedure for collecting data and analysing the data for this study. In short, it is known as a framework for the research plan. A quantitative technique and questionnaires by Google Forms were used to conduct a survey. The study mainly focused on the collection of numerical data and generalizes it to a few groups of people according to age, gender, profile history, and ethnic background and to explain specific phenomena. Students are choosing as representatives to give feedback towards knowledge, awareness and action towards healthy food intake among higher education institution students.

### Data Collection

The data for this study was obtained from primary sources. Primary data was data collected effectively from primary sources by research groups that have used questionnaires. The questionnaire used in this study was created using Google Forms. The questionnaire was applied to collect the information regarding the study of knowledge and awareness towards healthy food intake among higher education institution students.

### Sampling

The researcher used the probability technique because samples were chosen at random. The researchers used Krejcie and Morgan's (1970) formula to evaluate the sample group to provide an accurate and relevant sample for this study. The respondents consist of 370 higher education institution students who will be selected from all institutions in Malaysia.

$$s = \frac{x^2 N_P (1 - P)}{e^2 (N - 1) + x^2 p (1 - p)}$$

### Data Analysis

Data analysis is a way of reviewing records that uses statistical, logical, and analytical methods. The Statistical Package for Social Science (SPSS) is the data analysis tool. The SPSS programmer would be beneficial to the researcher in identifying the best statistical approach to apply. The SPSS data will explain statistics such as cumulative percentage and valid percentage. The researchers will utilize SPSS version 26.0 to build tables for data entry and analysis. The researcher was able to acquire data for industry study as well as do descriptive analysis, reliability analysis, and correlation analysis.

**FINDINGS**

**Result of Frequency Analysis**

Table 1: Frequency Analysis

| Characteristics | Frequency | Percentage |
|---|---|---|
| Gender | | |
| Male | 134 | 36.2 |
| Female | 236 | 63.8 |
| Race | | |
| Chinese | 40 | 10.8 |
| Indian | 77 | 20.8 |
| Malay | 245 | 66.2 |
| Others | 8 | 2.2 |
| Religion | | |
| Islam | 249 | 67.3 |
| Buddha | 44 | 11.9 |
| Hindu | 71 | 19.2 |
| Others | 6 | 1.6 |
| Academic Program | | |
| FHPK | 269 | 72.7 |
| FKP | 75 | 20.3 |
| JDS | 10 | 2.7 |
| Others | 16 | 4.3 |
| Years of Respondents | | |
| Year 1 | 29 | 7.8 |
| Year 2 | 58 | 15.7 |
| Year 3 | 235 | 63.5 |
| Others | 48 | 13.0 |

Table 1 presents the demographic profile of the respondents (N = 370). A total of 134 respondents were male (36.2%), while 236 were female (63.8%). In terms of ethnicity, the majority were Malay (66.2%), followed by Chinese (20.8%), Indian (10.8%), and others (2.2%). Most respondents identified as Muslim (67.3%), with the remainder comprising Hindus (19.2%), Buddhists (11.9%), and other religions (1.6%). The majority were enrolled in the Faculty of Hospitality, Tourism and Wellness (FHPK) (72.7%), followed by FKP (20.3%), JDS (2.7%), and other programs (4.3%). In terms of academic year, most were in Year 3 (63.5%), followed by Year 2 (15.7%), other years (13.0%), and Year 1 (7.8%).

**Result of Descriptive Analysis**

Table 2: Descriptive Analysis

| Variable | Items | Mean Score | Standard Deviation |
|---|---|---|---|
| **Knowledge** | I easily get information about eating healthy food intake. | 4.38 | 0.933 |
| | I was exposed to information about healthy food intake starting from school days. | 4.49 | 0.762 |
| | I realize the importance of knowledge about current healthy food intake. | 4.62 | 0.632 |
| | I know that healthy food intake is like taking adequate nutritional requirements in a daily diet. | 4.63 | 0.561 |
| | I know that health foods such as grains, legumes, and vegetables can improve one's health. | 4.64 | 0.632 |
| | A balanced diet and calorie deficit can help a person to achieve an ideal weight. | 4.65 | 0.571 |
| | I know healthy food intake can ensure that our body can receive all the nutrients that are sufficient it to function properly. | 4.65 | 0.630 |
| | I know the important of eating patterns because what we eat will highly influences occurrence of obesity. | 4.65 | 0.557 |
| | I understand that individuals who frequently skip meals, especially breakfast tend to over-eating at other meal times. | 4.56 | 0.723 |
| | A personas environment and emotions greatly influence daily food intake whether it is healthy or unhealthy food. | 4.60 | 0.719 |
| **Awareness** | I am awareness that healthy eating intake will affect my weight control | 4.54 | 0.682 |
| | I am aware that obesity is influenced by unhealthy eating habits. | 4.64 | 0.636 |
| | I am aware that healthy food intake is very important for a community. | 4.66 | 0.617 |
| | The healthiness of food has little impact on my food choices. | 4.49 | 0.769 |
| | I am very particular about the healthiness level of food intake that I eat. | 4.28 | 1.024 |
| | I am aware that by consistently eating fast food will raise my cholesterol level. | 4.58 | 0.687 |
| | I am aware that it is important to know | 4.57 | 0.680 |

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|---|---|---|---|
| | about healthy food intake. | | |
| | I am aware that it is important to eat two pieces of fruit and 250g of vegetables a day. | 4.41 | 0.848 |
| | I am aware that I cannot continue to consume too much sugar. | 4.51 | 0.827 |
| | I am aware that I must following a healthy and balanced diet for a better living. | 4.34 | 1.014 |
| **Action of Healthy Food Intake** | I always attend healthy eating-related programs. | 3.92 | 1.245 |
| | Exercise should not affect health. | 3.18 | 1.588 |
| | I will practice dietary food because it is part of the healthy food intake routine. | 4.42 | 0.820 |
| | I eat, what I like and I do not worry much about my food intake. | 4.21 | 1.055 |
| | It's difficult for me to practice healthy food intake due to my tight schedule. | 4.12 | 1.156 |
| | Healthy foods are more easily spoiled. | 3.50 | 1.524 |
| | I will make healthy food intake as a preference of family and friends. | 4.38 | 0.932 |
| | I cannot practice a healthy food intake because the price is expensive. | 3.52 | 1.529 |
| | I will make fresh fruit and vegetables as my snacks. | 4.26 | 0.993 |
| | I will pay attention to the contents of my daily food intake. | 4.32 | 0.958 |

The result in table 2 above shows that item of knowledge factor 1 (I easily get information about eating healthy food intake) has the highest mean score (M = 4.38, SD = 0.933) meanwhile item of knowledge factor 8 (I know the importance of eating patterns because what we eat will highly influences the occurrence of obesity) shows the lowest mean score (M = 4.65 SD = 0.557). As for the item of awareness factor 10 (I am aware that I must follow a healthy and balanced diet for a better living) shows the highest mean score (M = 4.34 SD = 1.014) meanwhile item of awareness factor 3 (I am aware that healthy food intake is very important for a community) shows the lowest mean score (M = 4.66 SD = 0.617). Lastly, as for the item of action of healthy food intake factor 2 (Exercise should not affect health) shows the highest mean score (M = 3.18 SD = 1.588) meanwhile item of action of healthy food intake factor 3 (I will practice dietary food because it is part of the healthy food intake routine) shows the lowest mean score (M = 4.42 SD = 0.820).

**Result of Reliability Analysis**

Table 3: Reliability Analysis

| Variable | Number of Items | Cronbach Alpha |
|---|---|---|
| Knowledge | 10 | 0.893 |
| Awareness | 10 | 0.871 |
| Action on Healthy Food Intake | 10 | 0.788 |

Table 3 shows that reliability analysis for the independent variable, which is the first one was knowledge with 10 questions, shows a Cronbach Alpha value of 0.893. Awareness is the second     independent variable which has 10 questions in questionnaire where the Cronbach Alpha value is 0.871. Lastly, the dependent variable which is action on healthy food intake has a Cronbach Alpha value which is 0.788.

**Result of Pearson Correlation Analysis**

Table 4: Pearson Correlation Analysis

| Hypothesis | P-Value | Result |
|---|---|---|
| H1: There is a significant relationship between knowledge to action toward healthy food intake. | 0.000 | Supported |
| H2: There is a significant relationship between awareness and action toward healthy food intake. | 0.000 | Supported |

The value for hypothesis 1 is below 0.05 and the p-value is under 0.05.  Thus, the alternative hypothesis will be accepted, and the null hypothesis will be refused. The intensity of the relationship between knowledge and action toward healthy food intake is strong. Hypothesis 2 shows that the significant value is below 0.05 and the p-value is above 0.05. Therefore, the alternative hypothesis was accepted, and the null hypothesis was refused. The intensity of the relationship between awareness and action toward healthy food intake is strong.

## DISCUSSION AND RECOMMENDATION

This study was conducted to look at knowledge, awareness, and action toward healthy food intake among higher education institution students. Furthermore, this study determined the relationship between information, awareness, and a healthy lifestyle among higher education institution students. Data were gathered through convenience sampling where the questionnaires were answered by the respondents among students of higher education institution, University Malaysia Kelantan. Nutrition education programmes were intended to promote nutrition knowledge in the community or a specific target demographic with the goal of promoting healthy eating habits. In most industrialized countries, citizens are educated about dietary standards or the intake of core food groups. Few studies have investigated the degree of nutrition knowledge in the general public or other specific group samples, and the impact of nutrition knowledge on dietary intake remains largely unknown (Charina, 2014). Improving health and leading a healthy lifestyle is critical for nations seeking to improve and establish sustainable development strategies while avoiding allocating money to lifestyle diseases. Chronic diseases are becoming more prevalent in developing countries, emphasizing the importance of providing health care in a way that protects and enhances health. Many chronic diseases may be induced by an inactive lifestyle, whereas healthy lifestyle behaviours can reduce disease risk (Fahad, 2020).

Future researchers should give more time to distribute questionnaires so that researchers can discover people who are more suitable and qualified to be respondents. For sample sizes of 370 respondents, it is difficult to finish data collection in a short amount of time. The researchers can then clarify the study's objective to the respondents if respondent were having trouble answering the questions. To avoid respondents merely answering the questions, this is critical. They may require some clarification and clarification so that the researchers may obtain more accurate and dependable data. A recommendation would be to learn how to utilize an analysis system like SPSS. Following the collection of responses or data from respondents, we must analyze the information and SPSS was used to do so. There are no ideas about which approach to apply to analyze the data and it will take a lot of time to learn how to utilize SPSS. After the data has been analyzed  and summarized, the interpretation is crucial. As a result, future researchers are advised to study and comprehend the analysis system that will be employed in their research. all university students should be encouraged to adopt a healthy lifestyle and take care of nutrition so as to avoid dangerous diseases, especially obesity. Finally, the study timeline needs to be added so that researchers have more time to complete the test and be able to add more findings in research especially at this time because of the Covid-19 pandemic. Therefore, the researcher can have more time to complete this study more perfectly and more systematically.

## CONCLUSION

This research is designed to study knowledge, awareness, and action toward healthy food intake among higher education institution students. The finding has shown that the two independent variables which are knowledge and awareness were related moderately to healthy food intake among higher education institution students. The researcher has seen the results of the two independent variables which are knowledge and awareness to have a significant relationship

with healthy food intake. The result shows that there was a relationship between knowledge and awareness of healthy food intake among higher education institution students. Additionally, the research questions will be a way to access the knowledge of healthy food intake to explore awareness to determine the level of health. The results of the data indicate that all the independent variables (knowledge and awareness) significantly influence the action toward healthy food intake. In general, knowledge and awareness had a moderate relationship with healthy food intake.

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