

### Parental Awareness of the Nutritional Intake to Their Children's Growth

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#### **DECLARATION**

I hereby declare that the work embodied in this report is the result of my own research except for the excerpt as cited in the references.

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### KELANTAN

#### Parental Awareness of the Nutritional Intake to Their Children's Growth

#### **ABSTRACT**

Nowadays, several reports from international bodies on nutritional requirements are alarming. Based on a report by the World Health Organization found that 17.7 percent of children and adolescents aged 5 to 19 years old in Malaysia have stunted growth. Besides, many parents are not aware of nutrition intake in providing food to their children. Therefore, this study aims to determine parental awareness of the nutritional intake to their children's growth. The independent variables in this study are knowledge, attitude, practices, perceived behaviour control, and subjective norm while the dependent variable is parent awareness of nutrient intake of their children. Quantitative research forms were used and questionnaires were adapted based on the KAP Model and the theory of planned behaviour (TPB). Nonprobability sampling was used using purposive sampling involving 150 parents who have children from age five until twelve years old. SPSS version 21.0 was used to analyze the data using reliability tests, normality tests, descriptive statistics, and correlation. Based on the results of this study found that all the variable has a high mean score. The results of the study also showed that there was a significant relationship between knowledge, attitudes, practices, subjective norms, and perceived behavioural control with parental awareness of nutrient intake in children. Hopefully, this study raises the awareness of parents about the importance of providing a balanced and healthy diet for the children's growth.

**Keywords**: Parental Awareness, Nutritional Intake, KAP Model, Theory of Planned Behaviour



#### Kesedaran Ibu Bapa tentang Pengambilan Pemakanan kepada Pertumbuhan Anak

Mereka

#### **ABSTRAK**

Pada masa kini, beberapa laporan daripada badan antarabangsa mengenai keperluan pemakanan membimbangkan. Berdasarkan laporan Pertubuhan Kesihatan Sedunia mendapati 17.7 peratus kanak-kanak dan remaja berumur 5 hingga 19 tahun di Malaysia mengalami pertumbuhan terbantut. Selain itu, ramai ibu bapa tidak mengetahui pengambilan nutrisi dalam menyediakan makanan kepada anak-anak mereka. Oleh itu, kajian ini bertujuan untuk mengetahui kesedaran ibu bapa terhadap pengambilan nutrisi terhadap tumbesaran anak-anak mereka. Pembolehubah bebas dalam kajian ini ialah pengetahuan, sikap, amalan, kawalan tingkah laku yang ditanggap, dan norma subjektif manakala pembolehubah bersandar ialah kesedaran ibu bapa terhadap pengambilan nutrien anak-anak mereka. Borang kajian kuantitatif telah digunakan dan soal selidik telah diadaptasi berdasarkan Model KAP dan Teori Tingkah Laku Terancang (TPB). Persampelan bukan kebarangkalian digunakan menggunakan persampelan bertujuan melibatkan 150 ibu bapa yang mempunyai forak dari umur lima hingga dua belas tahun. SPSS versi 21.0 digunakan untuk menganalisis data menggunakan ujian kebolehpercayaan, ujian normaliti, statistik deskriptif, dan korelasi. Berdasarkan hasil kajian mendapati bahawa kesemua pembolehubah mempunyai skor min yang tinggi. Hasil kajian juga menunjukkan terdapat hubungan yang signifikan antara pengetahuan, sikap, amalan, norma subjektif, dan kawalan tingkah laku yang ditanggap dengan kesedaran ibu bapa terhadap pengambilan nutrien dalam kalangan kanak-kanak. Semoga kajian ini dapat meningkatkan kesedaran ibu bapa tentang kepentingan menyediakan makanan yang seimbang dan sihat untuk tumbesaran anak-anak.

Kata kunci: Kesedaran Ibu Bapa, Pengambilan Pemakanan, Model KAP, Teori Tingkah

Laku Terancang

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#### LIST OF ABREVIATIONS

#### Reference No

KAP Knowledge, Attitude and Practice Model

TPB Theory of Planned Behaviour

WHO World Health Organization

UNICEF United Nations Children's Fund

MOH Ministry of Health

MOE Ministry of Education

NCWR National Child Welfare Roadmap

SPSS Statistical Package for the Social Science

EFA Exploratory Factor Analysis

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#### **CHAPTER 1**

#### INTRODUCTION

#### 1.0 Introduction

In this study, chapter 1 consists of background research, problem statement, hypothesis, research question, the scope of the study, the significance of the study, and organization of the study. This study focuses on the background on parental knowledge of the nutritional intake to their children's growth in Malaysia.

# MALAYSIA KELANTAN

#### 1.1 Background Research

Child malnutrition is a major public health concern all over the world. The World Health Organization (WHO) estimates that 144 million children are stunted, 47 million are wasted, and 38.3 million are overweight or obese (WHO, 2020). Undernutrition is linked to 45 percent of deaths among children. This harms children's growth rates all over the world, and everyone must play their part in raising a healthy generation. Malnutrition refers to any deficiency, excess, or imbalance in energy or nutrient intake, and includes both undernutrition and overnutrition (Ali, 2021). Between the undernutrition includes insufficiencies of micronutrients, as well as being underweight, stunting, and wasting. Stunting is one of the consequences of malnourished children. This is a common occurrence in many developing countries. The main issue with this condition is a lack of protein-energy, which occurs in children as young as two years old (Anggraini & Rachmawati, 2021). Aside from that, stunting has been related to many health and productivity risks in children, as well as an increased risk of morbidity and mortality. Several factors that contribute to the global rate of stunting are concerned and must address this issue to produce a healthy generation. Thus this study aims to determine parental awareness of the nutritional intake to their children's growth.

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#### 1.1.1. Malnutrition

Malnutrition is a situation characterized by a lack, overconsumption, or imbalance of energy, protein, and other nutrients; malnutrition kills roughly half for all children (Imani, Nasiri, & Sadoughi, 2020). Wasting, stunting, and being underweight are all effects of malnutrition on children's growth. Furthermore, micronutrient-related nutrient deficiencies, which include micronutrient deficiencies such as essential vitamins and minerals, contribute to the rising rate of childhood malnutrition. Malnutrition is caused by a variety of factors, including poor prenatal care, low knowledge among members of the family, public failures (injustice, war, and natural disasters), polluted environments, poor household nutrition, frequent and severe infections, insufficient food sources, and, most importantly, inequality. Even though malnutrition is important and plays a role in the development of common diseases, the community continues to ignore the issue.

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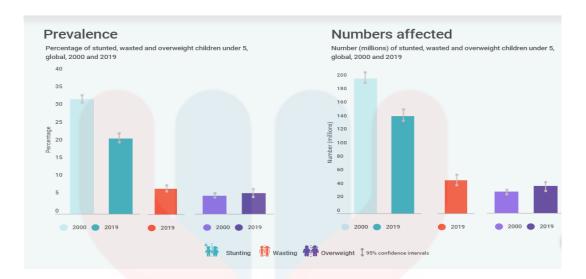


Figure 1.1: Percentage and number of stunted, wasted, and overweight children, global, 2000 and 2019

(Source: UNICEF/WHO/World Bank, 2020)

Nearly half of all deaths in children are caused by malnutrition. Malnutrition increases the risk of common infections killing children, increases the frequency and severity of infections, and delays recovery. Malnutrition and infection can interact to create a deadly cycle that exacerbates disease and worsens nutritional status. Poor nutrition during a child's first 1,000 days of life can lead to stunted growth, which has been linked to declining cognitive abilities as well as poor school and work performance.

We're still a long way from a world without hunger. While the prevalence of stunting has decreased since 2000, more than one in every to be stunted. In 2019, 144 million children were stunted, with 47 million of them suffering from wastage. Meanwhile, for more than a decade, the global number of overweight children has remained constant (WHO, 2020).

#### 1.1.2 Parental knowledge

The knowledge of parents in ensuring that their children get a balanced diet is very important. This is because parents could still help their children have a better quality of life by instilling proper eating habits in them. Parents should be on the lookout for new ways to teach their children the value of eating a nutritious diet. In practice, if parents can explain to their children that if they eat a healthy diet, they will be less likely to suffer from debilitating illnesses, children will be more likely to follow their parents' advice (Sultana, 2017).

According to Hidayah (2020), to address the issue of stunted growth among children, parents' awareness of providing a balanced diet covering the five food groups in the Malaysian Food Pyramid needs to be increased. When it comes to preparing nutritious food, it's not enough to just aim for "original satiety," because a casual attitude will have a long-term impact on children's growth. Thus, parents need to ensure that children get complete nutrition which should contain all the components of the food group.

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#### **1.2 Problem Statement**

Nutrition is recognized as an important factor in a child's overall growth, development, and function. Children need adequate food intake to supply them with the nutrients and energy they need to grow while not compromising their body's ability to stay healthy. However, nowadays malnutrition in the growth of children is a global issue that needs to be addressed by parents. The implications of this problem can affect the growth rate of children and result in stunted growth which is a type of abnormal growth of children. According to the World Health Organization (WHO), 17.7% of Malaysian children and adolescents aged 5 to 19 ye experience stunted growth (WHO, 2020). This is due to several factors such as lack of nutritional awareness among parents in providing food to children. Unfortunately, previous studies have found that there is poor awareness of malnutrition among parents (Meshesha, Birhane, Tamire, Diress, & Worku, 2021), while studies from Sultana (2017), also support that many parents are less aware of nutritional deficiencies balanced for the growth of their children and also adopt unhealthy eating habits at home. While nutritional awareness is the understanding of the relationship between nutritional issues and human life, which may affect one's life (Eze, Maduabum, Onyeke, Anyaegunam, Ayogu, Ezeanwu & Eseadi, 2017). Previous research has found that parents have a low level of awareness and knowledge about malnutrition (Meshesha et al., 2021). As a result, children do not get enough nutrients to grow, which can result in stunted growth.

According to Nazzaro, Lerro, and Marotta (2018), parents who are more aware of the nutritional characteristics of food have children who eat healthier. Parents who understand nutrition spend less money on salty snacks and soft drinks and more money on fruits and vegetables. (Gibson et al., 1998; Campbell et al., 2013; Nazzaro et al., 2018). Previous research has found that parents' awareness and knowledge of their children's nutrition are low, implying that appropriate action should be taken to raise awareness and address childhood malnutrition (Shohaimi, Sahidan, Zulkifly, & Hasibuan, 2021). The findings of this study show that parents' awareness of their children's nutrient intake is critical for their development.

Furthermore, poor eating habits have a significant and long-term negative impact on children's health (Scaglioni, DeCosmi, Ciappolino, Parazzini, Brambilla, & Agostoni, 2018). In the modern digital era, new and exciting food products that are "easy to cook" and "ready to eat" are appearing on the market, making it difficult for parents to make decisions. This research aims to determine parental awareness of the nutritional intake to their children's growth, which will help in analysing barriers in parents' understanding of healthy eating practices for their children.

#### 1.3 Hypothesis of the Study

H1: There is a significant relationship between knowledge with parental awareness of nutritional intake to their children' growth

H2: There is a significant relationship between attitude with parental awareness of nutritional intake to their children' growth

H3: There is a significant relationship between practices with parental awareness of nutritional intake to their children' growth

H4: There is a significant relationship between perceived behaviour with parental awareness of nutritional intake to their children' growth

H5: There is a significant relationship between subjective norm with parental awareness of nutritional intake to their children' growth

#### 1.4 Research Question

- 1. What is the level of awareness of parents about nutritional intake for the growth of their children?
- 2. What are the level of knowledge, attitude, practices, perceived behaviour control, and subjective norm on parents' awareness of nutritional intake on their children's growth?
- 3. What is the significant relationship knowledge, attitude, practices, perceived behaviour control, and subjective norm on parents' awareness of nutritional intake on their children's growth?

#### 1.5 Objective of Study

- 1. To determine the level of parental awareness of the nutritional intake to their children's growth in Malaysia.
- To determine the level of knowledge, attitude, practice, perceived behaviour control, and subjective norm towards parental awareness of the nutritional intake to their children's growth in Malaysia.
- 3. To determine the relationship knowledge, attitude, practice, perceived behaviour control, and subjective norm towards parental awareness of the nutritional intake to their children's growth in Malaysia.

#### 1.6 Scope of Study

The focus of this study is parents' awareness of nutrient intake on their child's growth as dependent variables. Although, knowledge, attitude, practices, perceived behaviour control, and subjective norms are the independent variables. Several factors influencing parental awareness of nutritional intake with their children's growth in Malaysia's rural and urban areas were chosen as population. The total number of respondents is 150 parents who have children from the age of five until twelve in Malaysia.

#### 1.7 Significant of Study

The purpose of this research was to study parents' knowledge of the impact of nutritional intake on their children's growth. This study is important because it will help increase knowledge about the importance of adequate nutritional intake for children's growth by identifying the factors of parental awareness of nutritional intake for children's growth.

A balanced diet consists of eating enough food to meet the body's needs (Musa, Shah, Rosli, & Ibrahim, 2021). Food and vitamins are essential for human growth and health. A well-balanced diet should provide all of the nutrients required by the body to function normally. Since we are children, good nutrition has an impact on our overall health. It also helps to strengthen the body's immune system both now and in the future,

as well as the body's natural immune system. To ensure optimal growth and development, children should consume the appropriate number of calories for their age as well as adequate nutrients such as carbohydrates, proteins, fats, vitamins, and minerals. If they do not get enough nutrients during this time, their growth and development will be stunted, which will contribute to a lack of weight and height. Excessive caloric intake and a lack of physical activity, on the other hand, will lead to childhood overweight and obesity. According to the Malaysian National Health and Morbidity Survey 2016, there is still a high prevalence of stunting (20.7%) and underweight (13.7%) among children aged five and under, while the prevalence of overweight has increased to 6.4%.

This study can also increase parents' awareness of the importance of providing balanced nutrition to children. Parents, for starters, play an important role in shaping their children's eating habits. A child is influenced by a parent's nutritional practices from birth to adulthood. Through this study, it is hoped that parents gain knowledge about healthy eating practices so that the health and development of their children is perfect. In addition, this study also aims to make parents aware of the importance of good nutrition practices in the growth of their children. On nutrition, it needs to be actively done with the Ministry of Health Malaysia (MOH) and the Ministry of Education Malaysia (MOE) so that every aspect of children's daily nutritional needs can be resolved to ensure social well-being at a young age.

According to a Berita Harian statement by former Deputy Prime Minister Datuk Seri Dr. Wan Azizah Wan Ismail, the government is working on the National Child Welfare Roadmap (NCWR) to address the issue of stunted and overweight or obese children (Irwan Shafrizan Ismail, 2018). Therefore, this study was conducted to give awareness to the community that the importance of adequate balanced nutrition for

children to assist the government in addressing the issue of stunted and overweight children.

As role models for their children, parents play an important role. As a result, they must adopt healthy eating habits and maintain physical activity. Childhood malnutrition (abundance or scarcity of nutrients) will have long-term consequences (Yap, 2018; Musa et. al, 2021). Proper nutrition practices and a healthy lifestyle begin at a young age and are critical for children's optimal growth and development so that they grow up to be healthy adults in the future. As a result, researchers hope that this study will assist parents in learning about healthy and correct eating patterns and practises. Furthermore, it is hoped that parents' awareness of the importance of a well-balanced diet will be raised. This study is expected to provide guidance to the community, particularly teachers and caregivers, in addition to parents.

This study can raise parents' awareness of the importance of a well-balanced diet in their children's development. According to an excerpt from Sinar Harian, UMMC Senior Consultant Paediatric Endocrinology, Professor Dr Muhammad Yazid Jalaluddin, stunted growth can affect children's IQ (Ghazali, 2019). Children's nutrition influences their ability to think critically. Therefore, the role of parents is very important in designing a balanced diet for children.

### MALAYSIA KELANTAN

#### **CHAPTER 2**

#### LITERATURE REVIEW

#### 2.0 Introduction

In this research, there are three objectives have been identified namely the level of parental awareness of the nutritional intake to their children's growth, the relationship of knowledge, attitude, practice, social norm, and perceived behaviour control towards parental awareness of the nutritional intake to their children's growth and the factor influencing parental awareness of nutritional intake with their children's growth. Besides, the review from the previous study helps to analyse and interpret in supporting the research topic, question, and hypothesis. In this study, the KAP Model and Theory of Planned Behaviour will be used to determine factors dealing with individual behaviours such as knowledge, attitude practice, perceived behaviour control, and subjective norm.

#### 2.1 Concept of Awareness of the Nutritional Intake to Their Children's Growth

In general, awareness entails being knowledgeable, conscious, and alert. Awareness is defined as the state or ability to perceive, feel, or be conscious of events, objects, or sensory patterns. Nutritional awareness also refers to understanding the interrelationships between nutritional issues and human life, which may have an impact on a person's life (Eze et al., 2017). Previous studies found a low level of awareness and a lack of knowledge among parents about malnutrition (Meshesha et al., 2021). As a result, children are deprived of adequate nutrients for growth, which can result in stunted growth.

According to Nazzaro et al. (2018), level higher parental awareness of food nutritional characteristics is more likely to be associated with healthier children's food habits. Parental awareness of food nutritional characteristics reduces the purchase and consumption of salty snacks and soft drinks while increasing expenditure on fruits and vegetables. (Blanchette and Brug, 2005; Gibson et al., 1998; Campbell et al., 2013; Nazzaro et al., 2018).

In a previous study, a low level of awareness about children's nutrition among parents demonstrates that appropriate action should be taken to raise awareness as well as address malnutrition among children (Shohaimi et al., 2021). This study shows that parental awareness of nutrient intake is important for children's growth.

#### 2.2 Theoretical Framework

The Planned Behaviour Theory (TPB) predicts a person's intention to engage in a specific behaviour at a specific time and location. This hypothesis seeks to explain all of the behaviour that individuals will engage in to gain influence. TPB is a widely used tool for predicting and describing a variety of domains. Aside from that, the KAP Model presents how knowledge of any practice (behaviour) will determine how a person's attitude toward the behaviour will be shown through the practice.

#### 2.2.1 KAP Model

The knowledge, attitude, and practice (KAP) model by Schwartz, (1976), served as the theoretical foundation for the development of the hypothesized relationships. According to the KAP model, knowledge positively influences an individual's attitude, which in turn influences practices or behaviour (Kwol, Eluwole, Avci, & Lasisi, 2020). Based on the KAP model, a person's attitude changes as his or her knowledge grows. A person's practice or behaviour changes as a result of a shift in attitude. Knowledge, attitudes, practices, and behaviours are the three main elements of the KAP model, and they are essential to its formation.

According to this model, attitudes, intentions, and behaviours are determined by knowledge. This statement is supported by researchers such as Kaiser, Ranney, Hartig, & Bowler (1999), who stated that knowledge is fundamental to one's attitudes and behaviours. Knowledge can be expanded by being exposed to new information through

talks, classes, media, lectures, and other scholarly activities. From the aspect of attitude, a person often acts based on attitudes built from knowledge. Thus, a change in attitude leads to a change in behaviour. A person's practice or behaviour is based on acquired knowledge.

The first component of the KAP Model is knowledge. Knowledge is the ability to acquire, store, and use information; it is the result of a combination of comprehension, experience, ingenuity, and skill. Knowledge underpins an individual's behaviour. Without knowledge, it is impossible to act on any information or issue that is obtained. According to Fiesbein and Ajzen (1975), knowledge is also known as a cognitive factor, where knowledge is a constructive foundation block in the structure of human thought. Knowledge also serves as the foundation for determining attitude, intention, and behaviour. Knowledge is the driving force behind behavioural change, and good knowledge can guide individuals to take corrective actions (Tang, Lin, Yang, Sun, Liu, & Yang, 2020). Relevant knowledge guidance can assist parents in understanding nutritional value, which leads to better food choices for their children.

According to Fiesbien and Ajzen (1975), human attitude can be described as a form of the tendency for humans to act consistently towards an object or situation. This tendency refers to a person's reaction to a message or new knowledge. The attitude refers to whether people are good or bad at evaluating their performance. A good attitude is the foundation of good behaviour, and a positive attitude can help improve the level of knowledge and correct inappropriate behaviour (Tang et al., 2020). Furthermore, attitudes are both an assessment of an individual's behavioural beliefs and an assessment of outcomes. Evaluation outcomes are appropriate positive or negative assessments of an individual's behaviour. For example, to evaluate parents' awareness of the importance of

ensuring adequate nutrient intake for their children and taking proactive measures to address the problem of childhood malnutrition.

The term "practice" is used to describe how knowledge and habits interact. Practices are also known as a person's behaviour based on the knowledge they have acquired. The practice done is the result of the knowledge that grows in a person. When one has a better understanding of knowledge, attitudes and practices allow for better actions to be taken to create a process of awareness. As one's level of knowledge grows, one's attitudes and practices will shift toward the positive. This is supported by Valente, Paredes, & Poppe (1998), stated that high involvement in a situation that is by learning something new will form a positive attitude and then will start the behaviour (practice). Behaviour performed refers to the practice performed after knowledge has increased. According to Perron & Endres (1985), past researchers have found that knowledge and practice have a relationship with the close. Increased knowledge can cause a person's attitude to change to be positive and act in accordance with the acquired knowledge, as evidenced by the relationship between knowledge and practice. For example, if a person is aware of the importance of adequate nutrient intake in child growth, their knowledge will grow, and their attitudes will change to be more positive, such as caring about children's balanced nutrition. Based on this study, individual behaviours towards awareness of nutrient intake on children's growth are influenced by knowledge, attitude, and practices.

### KELANTAN

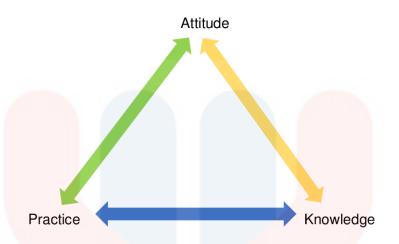


Figure 2.1 KAP Model

Sources: Schwartz, (1976).

#### 2.2.2 Theory Planned Behaviour (TPB)

The theory of planned behaviour by Ajzen is a behavioural theory that posits that behaviour is immediately determined by behavioural intentions and, in some cases, perceived behavioural control (Kan & Fabrigar, 2017). Three factors influence behavioural intentions: attitudes toward the behaviour, subjective norms, and perceived behavioural control. Attitudes are the first element in TPB theory are assumed to be causally related to behaviour. Attitude toward the behaviour refers to the "degree to which a person has a favourable or unfavourable evaluation of the behaviour in question" (Ajzen, 1991). For example, the attitude of parents and the community in knowing the importance of nutrition balance in their lives and ensuring that their children get an adequate source of nutrients in their food.

Subjective norms, or social pressures and behaviours, are influenced by normative beliefs, which are beliefs about other people's typical habits and expectations. Control

beliefs are perceptions about the presence or absence of factors that may facilitate or impede specific behaviours, and these control beliefs influence perceived behavioural control (Horne, Gilliland, Vohl, & Madill, 2020). Subjective norm also is defined as the perceived social pressure to perform the behaviour; perceived behaviour control is an individual's perception of the ease or difficulty of performing the desired behaviour (Ajzen, 1991). Control beliefs are perceptions about the presence or absence of factors that may facilitate or impede specific behaviours and these control beliefs influence perceived behavioural control (Wang, 2020). Subjective norms are defined as what significant others think is important about nutrition intake and a parent's perception of the social pressure on their children's nutritional intake.

The TPB includes a component of perceived behaviour control, which is hypothesized to predict behavioural intentions along with attitude and subjective norm and may also influence the intention-behaviour link (Shepherd, Sparks & Guthrie, 1995). The study will identify the relationship between perceived behaviour controls over parental awareness of the importance of providing balanced nutrition to children. Identify how the role of parents in adopting a balanced diet for children. Based on this study, individual behaviours towards awareness of nutrient intake on children's growth are also influenced by attitude, perceived behaviour control and subjective norms.

## MALAYSIA KELANTAN

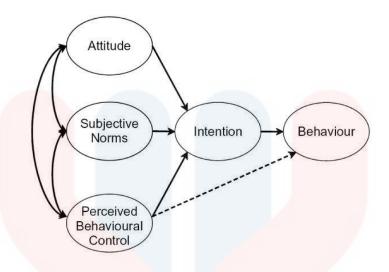


Figure 2.2 Theory of Planned Behaviour Source: Ajzen (1991)

### 2.3 Factor explaining Parental Awareness towards Nutritional Intake to Their Children's Growth

This section are will be explained attitude, knowledge, practices, perceived behaviour, and subjective norm as the factor that can influence parental awareness towards nutritional intake to their children's growth.

#### 2.3.1 Knowledge

### MALAYSIA

Knowledge is the ability to gather, store, and use information; it is the result of a combination of understanding, experience, ingenuity, and skill. Individual behaviour is based on knowledge. According to Ramanos et al. (2018), knowledge is a complex scheme of beliefs, information, and skills gained through experience and education. In

nutrition and eating, knowledge can be described as the familiarization of the benefits of food and nutrients on health.

According to Shohaimi et al. (2021), the higher level mothers' nutritional knowledge, the better their children's and family's food consumption. Another finding in a previous study by Berisha, Ramadani, Hoxha, Gashi, Zhjeqi, Zajmi, and Begolli (2017), the low level of parental knowledge about nutritious foods for children affects the way children are fed. Malnutrition most affects infants and children in many developing countries due to a lack of knowledge about how to feed children. Mothers who have a higher level of nutritional knowledge fed their children more vegetables, fruits, legumes, and less sugary drinks such as juices and fast foods than those with a lower level of nutritional knowledge. (Prasetya & Khomsan, 2019).

Other than that, some parents have a high level of nutritional knowledge in selecting healthier foods by interpreting nutritional information and labelling, but this knowledge is not used in the preparation of balanced meals for children. (Romanos et al., 2018). According to Chilenga and Sichilima (2018), the majority of parents have a low level of nutritional knowledge, implying that parents are unaware of how to provide their children with a balanced diet. Parents, particularly mothers, play a critical role in the development of children's eating habits, which transform into attitudes and behaviours (Sanlier, Ulusoy, Kocabas, Celik, Göbel, & Yilmaz, 2020). This is because parents have awareness about their children's nutritional intake, ensuring that they receive adequate nutrition and avoiding children who are malnourished.

#### 2.3.2 Attitude

Attitudes are emotional, motivational, perceptual, and cognitive beliefs that, whether conscious or unconscious, influence an individual's behaviour or practice. This is because such attitudes are measured to identify an individual's positive or negative tendencies toward health problems, dietary patterns, dietary recommendations, nutritional guidelines, or dietary preferences (Romanos et al., 2018).

Attitude is a major factor driving and determining human behaviour in the field of cognitive psychology (Pérez, Martínez, Izquierdo, & Gómez, 2020). The high levels of parental attitudes can affect a child's intake of fruits, vegetables, fish, butter, and meat (Romanos et al., 2018). Studies have shown that attitudes towards diet, food choices, and nutritional quality can be influenced by good nutritional knowledge and can then provide beneficial effects on obesity in children and young teenagers

Previous research has found that high levels of maternal attitudes toward food dishes can influence children's attitudes toward likes and dislikes and caregiver vegetable dishes to influence family members 'vegetable choices (Wenrich, Brown, Miller-Day, Kelley, & Lengerich, 2010). One of the parental attitudes that can influence a child's nutritional intake is to control parental attitudes. The previous study state the moderation level could be determined by the parents' attitudes towards food purchase and their preference toward foods such as processed meat and fast foods, education on choosing and feeding healthy food for children (Kim, & Cha, 2021).

#### 2.3.3. Practice

The term "practice" refers to how knowledge and habits interact. Practices are also known as a person's behaviour that is based on their knowledge. The practice that is done is the result of a person's growing knowledge. The finding in a previous study, the high level of mothers' practices are influenced parental awareness in the consumption of more nutritious foods for children's growth (Mohamed Ahmed Ayed, Kamel Yousef Ali, & Sayed Masoed Sayed, 2021).

Previous research has shown that parents with a low level of practice have the correct practice about vegetable intake (Heshmat, Minaei, Rostami, Ahadi, Shafiee, & Salehi, 2018). According to Lakshmi (2020), the importance of children's practices in terms of improved food quality and quantity consumption is critical. This is because it aids in their growth and health. Other findings from previous studies show that high levels of parental nutrition practices have an impact on children's growth and nutrition (Russell, Haszard, Taylor, Heath, Taylor, & Campbell, 2018).

#### 2.3.4 Perceived Behaviour Control

Perceived behavioural control refers to the actual control of people's behaviour, as well as their behavioural intentions, to carry out a specific action (Jadgal, Sayedrajabizadeh, Sadeghi, & Nakhaei-Moghaddam, 2020). This describes the impact that awareness of children's nutrition has had on various studies based on this theory, such

as parents' attitudes toward balanced nutrition and prevention of stunted risk factors.

Therefore, parental awareness is critical to ensuring that every food source provided has an impact on children's growth.

Perceived behaviour control, along with attitude and subjective norm, is thought to predict behavioural intentions and may influence the intention-behaviour link (Shepherd, Sparks & Guthrie, 1995). According to a previous study, high levels of behavioural control indicated healthy maternal eating behaviours in Australian mothers with preschool-aged children. The only variable positively associated with mothers' perceptions of their children's fruit and vegetable intake was perceived behavioural control (Chen, Huang, Chien, & Chen, 2020).

Moreover a previous study also found that mothers who had higher levels of perceived behavioural control more likely to engage in healthy feeding practises (McKee, Mullan, Mergelsberg, Gardner, Hamilton, Slabbert, & Kothe, 2019). This is consistent with previous research in other eating behaviours, which shows that both rational and automatic processes predict healthy eating. The same previous study found that mothers' behavioural control predicted preschool children's intake of fruits and vegetables. Higher perceived behavioural control was associated with higher fruit and vegetable consumption for the child (McKee et al., 2019).

#### 2.3.5 Subjective Norm

The term "subjective norm" refers to an individual's perception or opinion of social normative pressures that cause that person to do or not do something. The perceived social pressure to perform the behaviour is also defined as a subjective norm; perceived

behaviour control is an individual's perception of the ease or difficulty of performing the desired behaviour (Ajzen, 1991). Subjective norms are also independent variables that influence nutrient intake and growth in children. This is governed by normative beliefs, and acceptance of behaviour, whether positive or negative, can be viewed as social pressure on a person. Normative beliefs can be influenced by our friends, family, government, social media, and community.

Subjective norms are assessments based on the assumption that people are subjected to various social influences such as those from their parents, spouses, religious leaders, and so on (Jalambadani, Borji, & Delkhosh, 2018). According to the previous study higher mean scores indicate that parents have a more positive norm toward their child's healthy eating (McKee et al., 2019).

A high level of subjective norms of the family's role in children's healthy eating because the family's encouragement in the provision of healthy food helps children grow in a healthier direction by creating and promoting positive health behaviours through role models, healthy food preparation, and encouragement to engage in healthy eating habits (Scaglioni et al., 2018).

Furthermore, the high-level subjective norms for which the government takes the initiative to produce media that specifically targets parents, which are made periodically broadcast on television in collaboration with specific television programs. Content can include nutrition talk shows, cooking techniques, and shopping for healthy results on a tight budget, among other things (Sultana, 2017).

2.4 The Effect of Knowledge, Attitude, Practice, perceived behaviour control and subjective norm on Parental Awareness towards Nutritional Intake to Their Children's Growth

This section explained the effect of attitude, knowledge, practices, subjective norm, and perceived behaviour control on parental awareness towards nutritional intake to their children's growth.

## 2.4.1 The Effect of knowledge towards Parental Awareness Nutritional Intake on Their Children's Growth

Parents have a large influence on their children's eating habits and food preferences. Their nutritional knowledge and attitudes play an important role in childhood development, as parents serve as role models for their children's eating habits (Mushonga, Mujuru, Nyanga, Nyagura, Musaka, & Dembah, 2017). Therefore, parental awareness is very important in providing a balanced diet and parents need to know providing nutrition to children so that children get adequate nutrition.

The findings of the current study indicate that mothers' knowledge of balanced nutrition was found to have a highly significant correlation with the nutritional status of primary school children (Prasetya & Khomsan, 2018). This indicates that parents' awareness of balanced nutrition is high. The good maternal knowledge of growth monitoring does not automatically translate to improved child nutritional status unless it

is combined with a positive attitude and growth monitoring practices (Bukari, Abubakari, Majeed, Abizari, Wemakor, & Atosona, 2020).

According to previous research has shown that maternal cooking is important for improving children's nutrition because it is a source of balanced nutrition. (Warkentin, Mais, De Oliveira, Carnell, & de Aguiar CarrazedoTaddei, 2018). This can increase parents' knowledge of healthy eating in where has a highly significant relationship with children's eating behaviour.

The findings of previous studies state that nutrition-related knowledge about food choices, nutrition, and health care plays an independent role in producing good nutrition for children. Mothers' knowledge of their children's health and nutrition is very important in overcoming malnutrition (Fadare, Amare, Mavrotas, Akerele, & Ogunniyi, 2019). The ability of parents to improve their children's nutritional status is highly dependent on their level of dietary knowledge (Allafi, Almansour, & Saffouri, 2019). Unfortunately, a previous study had found that there is no significant relationship between parental knowledge and child nutritional outcomes (Fadare et al., 2019). Knowledge is critical for improving children's nutritional status because, indirectly, children's growth rates are increasing and they are becoming healthier. The importance of parental awareness in children's development is critical.

## 2.4.2 The Effect of Attitude towards Parental Awareness Nutritional Intake on Their Children's Growth

Parents' attitudes and beliefs about food were linked to their children's diet quality, highlighting the importance of parental psychosocial factors (Romanos et al., 2018). This

study assumes that healthy-eating attitudes are more important determinants of children's eating behaviour than parental nutritional knowledge. These attitudes appear to be influenced by family, experiences, knowledge, and environmental norms. Parents with more nutritional knowledge can interpret nutritional information and labelling to make healthier choices, but knowledge is useless if it is not put into practice or accompanied by healthy attitudes.

Based on previous research, the correlation between food intake and attitude score in this study was found to be significant (Mushonga et al., 2017). In this study, the parents' nutritional attitudes were low and appeared to be significantly influenced by their dietary selection attitudes. Previous research found that parents' attitudes toward their children's fruit and vegetable consumption were significantly higher (Albani, Butler, Traill, & Kennedy, 2018). This indicates that parents' awareness of their child's fruit and vegetable intake is linked to their attitudes.

Eating attitudes are emotional, motivational, perceptive, and cognitive beliefs that influence the behaviour or practice of an individual whether or not they know. Attitudes are measured to identify individual positive or negative dispositions regarding a health problem, dietary practices, nutritional recommendations, dietary guidelines, or dietary preferences. (Romanos, et al, 2018). However, contradict Prasetya, & Khomsan (2018) that found mothers' attitude to balanced nutrition did not correlate with awareness of nutritional intake on their children's growth.

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## 2.4.3 The Effect of Practices towards Parental Awareness Nutritional Intake on Their Children's Growth

'Food parenting practices', such as how parents feed their children, are linked to child eating habits, dietary intake, and weight (Jansen, Thapaliya, Aghababian, Sadler, Smith, & Carnell, 2021). This demonstrates that parental nutrition practices serve as a model for children. Parents should be aware that every dietary practice demonstrated is to be followed by their children. According to Prasetya, & Khomsan (2018), the mothers' practice on balanced nutrition had a highly significant correlation with the nutritional status of children's growth. Maternal practice has a significant relationship between nutrient intake and the growth of their children (Mohamed Ahmed Ayed et al. 2021). This means that there is a strong link between their nutritional intake and their children's growth.

According to Scaglioni et al. (2018), there is a significant positive parental nutrition practice with an awareness of nutritional intake to the child that has a significant impact on how their children eat. This is because it may have an impact on their child's eating habits. Children's food choices have a significant impact on their dietary intake.

### 2.4.4 The Effect of Perceived Behaviour Control towards Awareness Nutritional Intake on Their Children's Growth

The presence of adequate resources and the ability to control behavioural barriers influence behaviour performance; the more resources and fewer obstacles individuals perceive, the greater their perceived behavioural control and the stronger their intention to perform behaviours (Hardin-Fanning & Ricks, 2017). Parents have a large influence on their children's eating habits and food preferences. According to a previous study by Yarimoglu, Kazancoglu, and Bulut, (2019), perceived behavioural control has a significant relationship with balanced nutritional intake in everyday life. This suggests that a strong link exists between parents' perceived behaviour and their children's access to nutritious food.

From the previous study, there is a significant relationship between perceived behavioural control and parental awareness that providing a balanced diet and exposure to children can influence their growth and development (Lipkin, & Macias, 2020). Parents should expose their children to a variety of tastes, according to Scaglioni et al. (2018), to encourage balanced food intake. Children imitate their parents' eating habits, lifestyles, and nutrition-related attitudes.

Previous studies' findings for perceived behavioural control were significantly higher with mothers' awareness of their child's fruit and vegetable intake and unhealthy snacking behaviours (McKee et al., 2019). In a study conducted by Jadgal et al. (2020), the mean score of perceived behavioural control showed a significant increase in awareness of balanced nutrition that contributes to children's growth.

## 2.4.5 The Effect of subjective norm towards Awareness Nutritional Intake on Their Children's Growth

Children will imitate their parents' eating habits because they believe parental norms will serve as a guide for them to choose what is appropriate. Children's attitudes toward eating behaviours are influenced by their parents (Suhaimi, Hussin & Hashim, 2017). Therefore parents must demonstrate positive behaviour toward their children because the attitude itself causes children to imitate the negative attitudes of their parents.

Within the external factors, the construct "subjective norms" was a good predictor. It reflects social pressure, which can be explained as the influence of others on one's decision, and other studies have found that subjective norms are linked (Hummel, Talsma, Van der Honing, Gama, Van Vugt, Brouwer, & Spillane, 2018). This means that subjective norms in nutritional intake awareness can influence others, such as members of the community and family members, who are highly significant to the effect of providing balanced nutrition to children. This is because children are influenced by their surroundings.

Based on the previous study, subjective norms have a significant high impact on parents 'awareness of their eating styles that influence children's eating styles (Yarimoglu et al., 2019). According to Scaglioni et al. (2018), the parental role in creating and promoting children's balanced eating behaviours through healthy food preparation and support to engage in healthy eating behaviours is important.

Scaglioni et al. (2018), also found that individuals were highly significant effect to more likely to overeat while watching television and may learn unhealthy eating habits from advertisements and programs. Children from families who never watched television

during meal times or only for one meal a day consumed fewer servings of healthy foods and consumed more processed meats and snacks. Children from families who never watched television during meal times or only for one meal a day consumed fewer servings of healthy foods and consumed more processed meats and snacks.

#### 2.5 Summary

This chapter describes the awareness of nutritional intake among parents who have children under five age and the theory used in this study has been explained. This chapter also briefly explains about awareness of nutritional intake among parents based on independent variables such as knowledge, attitude, practices, perceived behavioural control, and subjective norm which using the KAP model and Theory of Planned Behaviour (TPB). Other than that, the effect of knowledge, attitude, practices, subjective norm, and perceived behavioural control on awareness of nutritional intake among parents is clearly explained which shows the significance of two relations between the independent variable and dependent variable.

#### **CHAPTER 3**

#### **METHODOLOGY**

#### 3.0 Introduction

From this part, discuss the procedure that use in this study. The way that the research was conducted and what method that used in research are briefly in this chapter. Research design is the first part of the discussion while the research framework is the second part. The instrumentation, population, sampling, and data preparation procedure will be placed under the third part of the research.

#### 3.1 Research design

To get information from the respondents based on this research, the quantitative research design was used. The dependent variable is parental awareness of the nutritional intake to children's growth. Data were analysed by using SPSS to enter data and analysis about the demographic profile, independent and dependent variables.

#### 3.2 Research Framework

Research framework prepared to identify the level of parental awareness of the nutritional intake to children. The dependent variable will be parental awareness of the nutritional intake to children's while independent variables will be knowledge, attitude, practices, perceived behavior control, and subjective norm that will be adapted from the KAP Survey Model by Schwartz, 1976 and the theory of planned behaviour (TPB) by Ajzen, (1991).

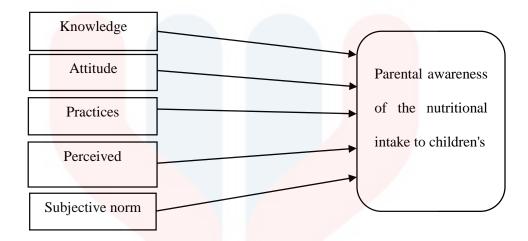


Figure 3.1: The conceptual framework (Adapted by Schwartz, 1976 & Ajzen, 1991)

#### 3.3 Instrumentation

Questionnaires were distributed to respondents among parents who have children ages five until twelve in Malaysia and a complete questionnaire was analysed. The questionnaire `involved sections A, B, C, D, E, F, and G. Section A is the demographic profile that includes gender, age, level of education, race, occupation, household income, number of children, and experience of seeing a child nutritionist while section B is parental awareness (dependent variables) and sections C, D, E, F, and G are independent variables include knowledge, attitude, practices, perceived behaviour, and subjective norm.

#### 3.3.1 Part A: Demographic Profile

The questions posed in this section are to review parental bios. Questions in this section include gender, age, level of education, race, occupation, household income, number of children, and experience of seeing a child nutritionist.

#### 3.3.2 Part B: Dependent Variable

This part contains the parental awareness of the nutritional intake to children in Malaysia that had five items of questions.

#### 3.3.3 Part C, D, E, F and G: Independent Variable

This question that answered by the respondent in this section based on independent variables. Part C is knowledge, part D is the attitude, part E is the practices, and part F is perceived behaviour while part G is the subjective norm.

#### 3.4 Population and sample

150 parents that had children aged five until twelve years old in Malaysia were selected as the population and sample of this study. Malaysia faces the threat of a double burden stunting, and obesity (UNICEF Global, Malaysia, 2019). This is usually caused by children not eating the right food or enough of the right foods.

#### 3.4.1 Sample Size

These study targets parents in Malaysia and examines parents' awareness of nutritional intake among their children. The sampling technique was being used for this study is purposive sampling in which the sample is selected among parents who have children aged five until twelve years old. The sample size was being 150 respondents and all of them will be answered the questionnaire provided. A reasonable absolute minimum for a large sample size is N = 50 which is generally considered from Exploratory Factor Analysis (EFA) as a technique while, for N below 50, quality results can also be obtained (Kyriazos, 2018). Moreover, larger sample sizes reduce sampling error but at a decreasing rate (Madanchian, Hussein, Noordin & Taherdoost, 2018). It is recommended that the sample size be more than 100. Therefore, 150 samples can be categorized in good and appropriate conditions.

#### 3.4.2 Sampling procedure

This study was being selected using purposive sampling, under non-probability sampling, which is being used to select a sample of subjects from the population for this survey. The sampling plan is based on the researcher's assessment of who will provide the most useful information for the study's goals. The person conducting the research should concentrate on people who share the same viewpoint to obtain the necessary information and be willing to share it (Etikan, & Bala, 2017). The sampling is also inexpensive, simple, and the subjects are readily available. Furthermore, this technique has limitations in terms of selecting a sample when the population is large, but it is useful when resources, time, and labour are limited. Therefore, the questionnaire will be distributed to parents of children five until twelve years old. For data collection, this survey used online survey and face to face method.

### 3.5 Data Preparation

The completed questionnaire was being tested by the pilot study to check the questionnaire. After that, the pilot test were be analysed by using a reliability test.

#### 3.5.1 Pilot Study

The questionnaires in this study was being tested before use. The test was performed by distributing questionnaires to parents who have children aged five until twelve years old in Malaysia to ascertain the likelihood of response and achieve results. About 30 respondents have answered the questionnaire and enough to measure the viability of the questionnaire. The Statistical Package for Social Science Software (SPSS) was be used to interpret the data to determine whether the questionnaires are acceptable and easy to understand before the questionnaire will be distributed to parents who have children aged five to twelve years old

#### 3.5.2 Reliability analysis

Reliability analysis is a technique that is commonly used to assess the reliability of scales and questionnaires. It also provides information about the Cronbach's alpha relationship between individual items used in this study. According to Blumberg, Seelke, & Lowen (2005), the term "reliability" refers to a measurement that produces consistent and equal results. It analyses a study's consistency, precision, repeatability, and credibility (Chakrabartty, 2013). It indicates the level to which it is free of bias and ensures consistent measurement across time and across the various items in the instruments that are the observed scores. In quantitative research, reliability refers to the consistency, stability, and repeatability of results; that is, a researcher's results are considered reliable if

consistent results have been obtained in identical situations but under different conditions (Twycross & Shields, 2005)

The reliability coefficient ranges from 0 to 1, with perfect reliability equalling 1 and no reliability equalling 0. The reliability of test-retest and alternate forms is typically calculated using statistical correlation tests (Traub & Rowley, 1991). Cronbach's Alpha should be greater than 0.9 for the reliability variable, but values of 0.8 or 0.7 may be acceptable in less important situations. According to Downing (2004), reliability greater than 0.8 is considered high.

For this study, if the Cronbach's alpha reading is greater than 0.8, all of the variables are suitable. However, if the value is less than 0.7, it is still acceptable and it can be concluded that KAP and TPB are suitable for this study because the results show that the variables of the KAP and TPB are consistent with their relevance (Heo, Kim & Faith, 2015).

The reliability analysis results are shown in Table 3.2, which includes parents' awareness of their child's nutrient intake, knowledge, attitudes, practises, perceived behavioural control, and subjective norms. Cronbach's Alpha values were 0.752 for knowledge, 0.840 for attitude, 0.900 for practice, 0.906 for perceived behaviour control, 0.919 for subjective norm, and 0.757 for parents' awareness of nutrient intake. It is possible to conclude that KAP and TPB are appropriate for this study because the results show that the variables KAP and TPB have a value greater than or equal to 0.7 with their correlation, which is still acceptable.

Table 3.2: Reliability test

Variables	Cronbach's Alpha	Number of Items
Knowledge	0.752	10
Attitude	0.840	8
Practices	0.900	9
Perceived B <mark>ehaviour Co</mark> ntrol	0.906	8
Subjective Norm	0.919	8
Parents 'Awareness of Nutrient	0.757	5
Intake		

#### 3.6 Data Analysis

Data analysis is the process of interpreting or evaluating data using analytical and statistical tools to assess and prove the data's accuracy. Examining frequency and descriptive statistics, as well as encoding and entering data, are all methods for cleaning data. Descriptive statistics such as mean, frequency, percentage, and standard deviation can be used to analyse data using the SPSS program. The reliability test, normality test, descriptive and correlation analysis were all used in this study as inferential statistical analysis.

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#### 3.7 Summary

In this chapter, the methodology of this study will be briefly described. In the research design, quantitative methods were demonstrated using SPSS. This is used to analyse the data according to the objectives of the study. The framework of the study shows which dependent variables parental awareness of the nutritional intake to children's growth and five independent variables namely knowledge, attitude, practices, perceived behaviour control and subjective norm. In addition, 150 respondents among parents who have children aged five until twelve years old in Malaysia was selected as the sample size.

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#### **CHAPTER 4**

#### RESULT AND DISCUSSION

#### 4.0 Introduction

This chapter presents the results and conclusions of the studies that have been conducted. Purposive sampling, also known as non-probability sampling, was used on 150 parents who have children aged five to twelve years old. Respondents among the parents were given a questionnaire form in person and online using Google form and the questionnaire results were collected for further analysis. The analysis that discusses the objectives of the study is based on the level of awareness, knowledge, attitudes, practices, perceived behavioural control and subjective norms on parental awareness of child nutritional intake.

#### 4.1 Descriptive Analysis

Descriptive analysis is gathered through reviews. It includes levels of awareness, knowledge, attitudes, practices, subjective norms, and perceived behavioural control over the parental awareness towards child's nutritional intake, including percentage and frequency. This analysis was also applied to the Likert Scale questionnaire to determine the percentage and mean for awareness, knowledge, attitudes, practices, subjective norms, and perceived behavioural control.

#### 4.1.1 Demographic Profile

A descriptive analysis was conducted to determine the demographic profile of parents with children aged 5 to 12 years who are aware of their child's nutritional intake. Demographic information includes gender, age, level of education, race, occupation, household income, number of children, and experience of seeing a child nutritionist.

Based on the overall results, the highest percentage for gender is female respondents which are 80% with a frequency of 120 people while the percentage of male respondents is 20% with a frequency of 30 people. Next is for the highest percentage of all parents aged 25-35 is 33.3%, followed by ages between 36-45 years is 24.7%, age under 25 is 34%, and 45 years and above 8.0%. For the education level, Higher education had the highest percentage 81.3 %, followed by secondary school 18%, no formal education 0.7%, and primary school 0%. As a result percentage for the race, the

percentage of Malay respondents was the highest (75.3%), followed by Chinese is 20.7%, while the percentage of Indian and other respondents was the same 2.0%.

According to the percentage results for occupation, parents who work in the private sector have the highest percentage 31.3%, followed by parents who are self-employed (20.7%), parents who work in the public sector (30%), and housewives have the lowest percentage (18%). The highest percentage of household income was RM 3001 and above 32.7%, followed by household income less than RM 1000 is 29.3%, monthly income between RM 1001-RM 2000 (21.3%), and finally household income between RM 2001-RM 3000 that is 16.7%.

Parents with one child accounted for the majority of the high percentage of children (44%), followed by parents with two children (24%), parents with four or more children (20.7%), and a low percentage of parents with three numbers children is 11.3%. Lastly, for the experience of seeing a child nutritionist, 70% of parents showed never had the experience of seeing a child nutritionist while for parents who have experience seeing a child nutritionist is 30%.

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Table 4.1: Demographic profile

	Character	Frequency	Percentag
Gender	Male	30	20
	Female	120	80
Age	< 25 years	51	34
	25 – 35 ye <mark>ars</mark>	50	33.3
	36 – 45 ye <mark>ars</mark>	37	24.7
	> 45 years	12	8.0
Education Lev <mark>el</mark>	No Formal Education	1	0.7
	Primary School	0	0
	Secondary School	27	18
	Higher Education	122	81.3
Race	Malay	113	75.3
	Chinese	31	20.7
	Indian	3	2.0
	Others	3	2.0
Occupation	Public Sector	45	30
	Private Se <mark>ctor</mark>	47	31.3
	Self-employed	31	20.7
	Housewife	27	18
Household Income	< RM1000	44	29.3
	RM 1001 – RM	32	21.3
	2000		
	RM 2001 – RM	25	16.7
	3000		
	> RM 3001	49	32.7
Number of Children	1 Chid	66	44
	2 Chid	36	24
	3 Chid	17	11.3
	> 4 Chid	31	20.7
Experience of seeing a child nutritionist	Yes	45	30
	No	105	70

## 4.1.2 Level of awareness of parents about nutritional intake for the growth of their children

The results of a descriptive analysis of parental awareness of nutrient intake for child growth are shown in table 4.2. Table 4.2 shown 78.0% of parents strongly agreed with the statement "I realize nutrition plays an important role in my children's physical and mental growth" and 20.7% of parents agreed with the statement while followed by an average of 1.3% of parents with the statement. It shows that parents are aware that nutrition plays an important role in the physical and mental growth of children.

The results showed that 71.3% of parents strongly agreed with the statement "I am aware that a balanced diet can supply all the essential nutrients for my child's development and growth", 25.3% of parents agreed and 3.3% of parents either disagreed or agree with the statement. Clearly shows that most parents are aware of the importance of a balanced diet in the development and growth of children.

As for the statement "I am aware that milk and dairy products such as yogurt and cheese supply essential nutrients such as calcium, potassium, phosphorus, protein, vitamin A and vitamin D needed for my child's growth", 67.3% of parents strongly agreed with a statement. Followed by 28.0% of parents agreed with the statement. 3.3% of parents either disagreed or agreed, and 1.3% of parents disagreed with the statement. It shows that parents are aware that dairy products are very important and very necessary for the growth of their children. Next, for the statement "I am aware the importance of nutrient intake in the growth of children", 76.7% of parents strongly agree, 22.7% of parents agree and 0.7% of parents disagree or agree with the statement.

Lastly, the statement "I am aware the practice of providing healthy meals to children can have a positive impact on their development" show 72.7% of parents strongly agree, 22.7% of parents agree, 4.0% either disagreed or agreed and 0.7% disagreed with that statement. Based on the result of the statement show the parents are very aware of providing healthy meals to their children.

Based on the result in Table 4.3 the mean score of awareness of parents about nutritional intake for the growth of their children is the high mean score (M= 4.6987, SD=0.42268). According to Nazzaro et al. (2018), their research also found that higher levels of parental awareness of food nutritional characteristics are more likely to be associated with children's healthier eating habits, indicating that parents are more aware of nutrition that is balanced for their children. Contrary to Meshesha et al. (2021), stated that they found low levels of awareness and a lack of parental knowledge about malnutrition. As well as the study from Shohaimi et al. (2021), stated that a low level of awareness and knowledge about children's nutrition among parents demonstrates that appropriate action should be taken to raise awareness as well as address malnutrition among children.

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Table 4.2: Descriptive analysis for awareness of parents about nutritional intake for the growth of their children

Statement		Perc	SD	Mean			
	1	2	3	4	5	•	
I am aware nutrition plays an important	0.00	0.00	1.3	20.7	78.0	0.455	4.77
role in the physical and mental growth of							
my children.							
I am aware a balanced diet can supply all	0.00	0.00	3.3	25.3	71.3	0.535	4.68
the nutrients that are essential for the							
development and growth of my child.							
I am aware milk and dairy products such	0.00	1.3	3.3	28.0	67.3	0.622	4.61
as yogurt and cheese supply essential							
nutrients such as calcium, potassium,							
phosphorus, protein, vitamin A and							
vitamin D that are needed for my child							
growth.							
I am aware the importance of nutrient	0.00	0.00	0.7	22.7	76.7	0.444	4.76
intake in the growth of children.							
I am aware the practice of providing	0.00	0.7	4.0	22.7	72.7	0.585	4.67
healthy meals to children can have a							
positive impact on their development.							

<sup>\*</sup>Indicator: 1. Strongly Disagree 2. Disagree 3. Either Disagreed or Agreed 4. Agree 5. Strongly Agree

Table 4.3: Mean score of Parental awareness on nutritional intake

Variable	Frequency	Percentage (%)	Mean	SD
Parental awareness			4.6987	0.42268
on nutritional intake				
Low (1.00-2.33)				
Medium (2.34-3.67)	5	3.3		
High (3.68-5.00)	145	96.7		

### 4.1.3 Level of knowledge toward parental awareness of the nutritional intake to their children's growth.

The descriptive analysis result for knowledge of parental awareness of nutritional intake for their children's growth is shown in Table 4.4. Table 4.4 shows that 70.7% of parents know about the statement "Malnutrition refers to a lack, excess or imbalance in a person's energy or nutrient intake that causes stunted growth, weight loss, overweight and obesity" and 26.0% of parents were not sure with the statement while followed by 3.3% of parents were don't know of the statement. It shows that the majority of parents are knowledgeable about the malnutrition problems that often occur to children.

The results showed that 67.7% of parents know about the statement "Parents need to provide carbohydrate sources such as rice, cereal products, and tubers as much as 50% of the total daily caloric intake of children", 34.7% of parents were not sure about the statement and 2.7% parents do not know the statement. Clearly shows that most parents are aware of their role in providing carbohydrate sources such as rice, cereal products, and tubers as much as 50% of the total daily caloric intake of children.

Furthermore, 86.7% of parents know about the statement "A variety of foods such as carbohydrates, proteins, fats, vitamins, and minerals are needed to ensure that children get all the nutrients they need every day, while 10.0% of parents are not sure about the statement and 3.3% of parents were don't know of the statement. This shows that the majority of parents know that a variety of foods such as carbohydrates, proteins, fats, vitamins, and minerals are needed by children to get all the nutrients they need every day.

For the statement "Micronutrients are vitamins and minerals that are needed in moderate quantities to continue to support the growth of children", 67.7% of parents know. Followed by 30.0% of parents are not sure about the statement and 7.3% of parents do not know about the statement. This shows that parents are knowledgeable about micronutrients such as vitamins and minerals that their children need to help in growth.

Moreover, for the statement "Balanced nutrition is the intake of sufficient food for the body's needs", 83.3% of parents who know and followed 14.0% of parents were not sure and 2.7% of parents were don't know of the statement. This shows that most parents know about the balanced diet required for their children. Next, for the statement "A child's health will be impacted by frequent late-night eating and high-calorie food consumption", 80.7% of parents know while 15.3% of parents were not sure and 4.0% of parents were don't know of the statement. Clearly shows that parents know that their children's health will be affected if they consume high-calorie foods late at night.

"Lack of nutrients causes my child's growth to be stunted" is the statement with the answer that 76.0% of parents know with the statement. About 18.7% of parents were not sure of the statement and 5.3% of parents don't know about the statement. Clearly shows that the majority of parents know the effects of malnutrition can cause their child's growth to be stunted. Then, the statement "Milk is a high-quality protein that is essential for cell growth, regeneration and repair of body tissues", 83.3% of parents answered the know, 14.7% of parents were not sure and 2.0% were don't know about the statement. This case shows the parents know of the benefits of milk for the growth, regeneration, and repair of body tissues for their child.

According to Table 4.4 the statement "Vegetables and fruits are very helpful in the digestive process of children", 86.7% of parents answered the know, 10.7% of parents

were not sure and 2.7% were don't know about the statement. The statement shows that majority of parents know about the benefits of vegetables and fruits are very helpful in the digestive process of children.

For the statement of "Consumption of 6 to 8 glasses of water, a day is important for active children to avoid the effects of dehydration", 82.0% of parents answered know, 16.0% of parents were not sure and 2.0% were don't know about the statement. Based on the response that majority of parents know about the benefits of consumption of 6 to 8 glasses of water a day is important for active children to avoid the effects of dehydration.

Based on the result in Table 4.5 the mean score of knowledge toward parental awareness of the nutritional intake to their children's growth is considered high mean score (M= 2.7393, SD=0.31790). According to Sukandar et al. (2017), their research found that the higher-level mothers' nutritional knowledge, the better their children's and family's food consumption. As the author, Prasetya & Khomsan (2021), support that statement, which they found that mothers who have a higher level of nutritional knowledge fed their children more vegetables, fruits, legumes, and less sugary drinks such as juices and fast foods than those with a lower level of nutritional knowledge. Followed by Romanos et al. (2018), found that in their research some parents have a high level of nutritional knowledge in selecting healthier foods by interpreting nutritional information and labelling, but this knowledge is not used in the preparation of balanced meals for children.

While contrary to the findings of the study of Berisha et al. (2017), who's study found that the low level of parental knowledge about nutritious foods for children affects the way children eat. Malnutrition most affects infants and children in many developing countries due to a lack of knowledge about how to feed children. Followed by Chilenga

& Sichilima (2018), the results of their study found that the majority of parents have a low level of nutritional knowledge, implying that parents do not know how to provide a balanced diet to their children.

Table 4.4: Descriptive analysis for knowledge of parents about nutritional intake for the growth of their children

Statement	Perce	ntage (9	%)	SD	Mean
	1	2	3		
Malnutrition refers to a lack, excess or imbalance in a	3.3	26.0	70.7	0.537	2.67
person's energy or nutrient intake that causes stunted					
growth, weight loss, overweight and obesity.					
Parents need to provide carbohydrate sources such as	2.7	34.7	67.7	0.543	2.60
rice, cereal products and tubers as much as 50% of the					
total daily caloric intake of children.					
A variety of foods such as carbohydrates, proteins, fats,	3.3	10.0	86.7	0.455	2.83
vitamins and minerals are needed to ensure that children					
get all the nutrients they need every day.					
Micronutrients are vitamins and minerals that are	7.3	30.0	67.7	0.630	2.55
needed in moderate quantities to continue to support the					
growth of ch <mark>ildren.</mark>					
A balanced diet is the intake of enough food for the	2.7	14.0	83.3	0.459	2.81
body's needs.					
A child's health will be impacted by frequent late-night	4.0	15.3	80.7	0.511	2.77
eating and high-calorie food consumption.					
Lack of malnutrition caused my child's growth to stunt.	5.3	18.7	76.0	0.562	2.71
Milk is a high quality protein that is essential for cell	2.0	14.7	83.3	0.439	2.81
growth, regeneration and repair of body tissues.					
Vegetables and fruits are very helpful in the digestive	2.7	10.7	86.7	0.435	2.84
process of children					
Consumption of 6 to 8 glasses of water a day is	2.0	16.0	82.0	0.449	2.80
important for active children to avoid the effects of					
dehydration					

<sup>\*</sup>Indicator: 1. Don't Know 2. Not Sure 3. Know

Table 4.5: Mean score knowledge

Variable	Frequency	Percentage (%)	Mean	SD
Knowledge			2.7393	0.31790
Low (1.00-2.00)	8	5.3		
High (2.01-3.00)	142	94.7		

### 4.1.4 Level of attitude toward parental awareness of the nutritional intake to their children's growth.

The descriptive analysis result for the attitude of parents 'awareness of nutritional intake for their children's growth is shown in table 4.6. It is about 62.7% of parents strongly agreed with the statement "I am very concerned about the importance of balanced nutrients in my children's growth", and 31.3% of parents who agree with the statement. Followed by 4.7% of parents either disagreed or agreed while the other 1.3% of parents who disagree with the statement.

The result shows 72.7% of parents strongly agree with the statement "I believe that a well-balanced diet rich in carbohydrates, proteins, fat, vitamins, and minerals promotes my children's growth" and 23.3% of parents who agree with the statement. Followed by 3.3% of parents either disagreed or agreed while the other 0.7% of parents who disagree with the statement.

For the statement "I am implementing the concept of the quarter, quarter, and half nutrition in Malaysia healthy plate can help my children overcome malnutrition", 50.0% of parents who strongly agree with the statement. Followed by 27.3% of parents agree with the statement. It is about 17.3% of parents who both disagreed or agreed with the statement, 3.3% of parents disagree with the statement and 2.0% of parents strongly disagree with the statement.

According to Table 4.6 the statement "I am sensitive to my child's growth stage through physical changes such as weight and height", has 60.0% strongly agree with the statement, 30.0% of parents agree with the statement followed by 7.3% of parents either

disagreed or agreed with the statement. While the other 2.7% of parents disagree with the statement.

"The calories consumed daily should be obtained from a variety of sources so that children get the nutrients they need in amounts appropriate for their growth and fitness" is the statement with the answer that 60.7% of parents strongly agree with the statement. About 32.7% of parents agree with the statement, 6.0% of parents either disagreed or agreed about the statement. While the other 0.7% of parents disagree with the statement.

The result shows that 56.7% of parents strongly agree with the statement "I will ensure a balanced diet selection and moderate serving sizes so that my child gets an adequate source of nutrition", 36.7% of parents who agree with the statement and 4.7% of parents either disagreed or agreed about the statement. Followed by 2.0% of parents disagree with the statement.

For the statement "For an adequate food source, I provide a variety of foods of different textures, color, and flavours to my child", 56.7% of parents strongly agree with the statement. Followed by 28.7% of parents agree with the statement. About 10.7% of parents either disagreed or agreed with the statement, 3.3% of parents disagree with the statement and 0.7% of parents strongly disagree with the statement.

The result shows that 63.3% of parents strongly agree with the statement "I need to guide my child in the selection of balanced foods according to daily needs", 28.7% of parents who agree with the statement, and 6.7% of parents either disagreed or agreed about the statement. Followed by 0.7% of parents who disagree and strongly disagree with the statement.

Based on the result in Table 4.7 the mean score of attitude toward parental awareness of the nutritional intake to their children's growth is considered high mean

score (M= 4.4783, SD=0.57177). The results of a study from Romanos et al. (2018), found that high parental attitudes can influence children's intake of fruits, vegetables, fish, butter, and meat. These studies have shown that attitudes toward diet, food choices, and nutritional quality can be influenced by good nutritional knowledge and can then have a beneficial effect on obesity in children and young adolescents. Supported by a study by Wenrich et al. (2010), found that a high level of maternal attitudes towards food dishes can influence children's attitudes towards likes and dislikes as well as caregiver vegetable dishes to influence family members' vegetable choices. Fathers who can influence children's nutritional intake is to control parental attitudes. While a study from Kim, & Cha (2021), found that the level of moderation can be determined by parents' attitudes towards food purchases and their preference for foods such as processed meats and fast foods, education of choosing and feeding healthy foods for children.

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Table 4.6: Descriptive analysis for the attitude of parents about nutritional intake for the growth of their children

Statement		Per	centage	(%)		SD	Mean
	1	2	3	4	5	_	
I am very concerned about the importance	0.0	1.3	4.7	31.3	62.7	0.651	4.55
of balanced nutrients in my children's growth							
I believe that a well-balanced diet rich in	0.0	0.7	3.3	23.3	72.7	0.571	4.68
carbohydrates, proteins, fat, vitamins, and minerals promotes my children's growth							
I am implementing the concept of quarter,	2.0	3.3	17.3	27.3	50.0	0.976	4.20
quarter, and half nutrition in Malaysia healthy plate can help my children							
overcome malnutrition.							
I am sensitive to my child's growth stage through physical changes such as weight	0.0	2.7	7.3	30.0	60.0	0.748	4.47
and height							
The calories consumed daily should be	0.0	0.7	6.0	32.7	60.7	0.642	4.53
obtained from a variety of sources so that children get the nutrients they need in							
amounts appropriate for their growth and							
fitness.							
I will ensure a balanced diet selection and	0.0	2.0	4.7	36.7	56.7	0.683	4.48
moderate serving sizes so that my child gets an adequate source of nutrition.							
For an adequate food source, I provide a	0.70	3.3	10.7	28.7	56.7	0.856	4.37
variety of foods of different textures, colors	0.70	3.3	10.7	20.7	30.7	0.050	1.57
and flavors to my child.							
I need to guide my child in the selection of	0.70	0.7	6.7	28.7	63.3	0.711	4.53
balanced foods according to daily needs.				G. 1			

<sup>\*</sup>Indicator: 1. Strongly Disagree 2. Disagree 3. Average 4. Agree 5. Strongly Agree

Table 4.7: Mean Score of Attitude

Variable	Frequency	Percentage (%)	Mean	SD
Attitude	AL	AYS	4.4783	0.57177
Low (1.00-2.33)				
Medium (2.34-3.67)	19	12.7		
High (3.68-5.00)	131	87.3		

### 4.1.5 Level of practices toward parental awareness of the nutritional intake to their children's growth.

The descriptive analysis result for practices of parents' awareness of nutritional intake for their children's growth is shown in table 4.8. It is about 59.3% of parents strongly agreed with the statement "Prioritize a balanced diet every time preparing food for children.", and 26.7% of parents who agree with the statement. Followed by 12.0% of parents either disagreed or agreed while the other 1.3% of parents who disagree and 0.7% of parents strongly disagree with the statement.

The result shows that 69.3% of parents strongly agree with the statement "I make sure my chid take breakfast as a practice in life", 23.3% of parents who agree with the statement and 4.7% of parents either disagreed or agreed about the statement. Followed by 1.3% of parents who disagree and strongly disagree with the statement.

For the statement "Always ensure that my child consume high-fiber foods to aid in the digestive process." 53.3% of parents who strongly agree with the statement. Followed by 37.3% of parents agree with the statement. About 7.3% of parents who either disagreed or agreed with the statement and 2.0% of parents disagree with the statement.

"Always provide adequate protein sources such as fish, meat, and dairy products for my child" is the statement with the answer that 62.7% of parents strongly agree with the statement. About 33.3% of parents who agree with the statement, 3.3% of parents either disagreed or agreed about the statement.

While the other 0.7% of parents who disagree with the statement. The result shows that 58.0% of parents strongly agree with the statement "Provide children with a balanced

and varied diet that includes carbohydrate, protein, fruits, and vegetables, especially when dining out", 29.3% of parents who agree with the statement and 9.3% of parents either disagreed or agreed about the statement. Followed by 3.3% of parents disagree with the statement.

For the statement "I prefer to cook at home rather than buy food outside to be healthier and safer." 64.0% of parents who strongly agree with the statement. This is followed by 26.7% of parents who agree with the statement. About 8.0% of parents who either disagreed or agreed with the statement and 0.7% of parents disagree and strongly disagree with the statement.

According to Table 4.8 the statement "I'll have a supply of home-cooked food ready for the children", has 62.0% strongly agree with the statement, 20.7% of parents who agree with the statement followed by 14.0% of parents either disagreed or agreed with the statement. While the other 2.0% of parents disagree with the statement and 1.3% of parents strongly disagree with the statement.

The result shows that 52.7% of parents strongly agree with the statement "I will cook in a healthier way of preparation like boiling and grilling", 28.0% of parents who agree with the statement and 16.0% of parents either disagreed or agreed about the statement. Followed by 2.0% of parents disagree with the statement and 1.3 of parents strongly disagree with the statement.

For the statement "I make sure the children drink plenty of water and limit their intake of sugary beverages", 62.7% of parents who strongly agree with the statement. Followed by 29.3% of parents agree with the statement. It is about 6.0% of parents who either disagreed or agreed with the statement and 2.0% of parents disagree with the statement.

Based on the result in Table 4.9 the mean score of practices toward parental awareness of the nutritional intake to their children's growth is considered high mean score (M= 4.4630, SD=0.59834). According to the findings of a study conducted by Mohamed Ahmed Ayed et al. (2021), a high level of maternal practise influences parental awareness in the consumption of more nutritious foods for children's growth. Contrary to the results of the study of Russell, et al. (2018), found that parents with low levels of practice had proper practices about vegetable intake. Clearly shows that parental practices in providing nutritious food are low.

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Table 4.8: Descriptive analysis for practices of parents about nutritional intake for the growth of their children

Statement		Per	centage	(%)		SD	Mean
	1	2	3	4	5		
Prioritize a balanced diet every time	0.7	1.3	12.0	26.7	59.3	0.806	4.43
preparing food for children.							
I make sure my chid take breakfast as a	1.3	1.3	4.7	23.3	69.3	0.762	4.58
practice in life.							
Always ensure that my child consume	0.0	2.0	7.3	37.3	53.3	0.717	4.42
high-fiber foods to aid in the digestive							
process.							
Always provide adequate protein sources	0.0	0.7	3.3	33.3	62.7	0.594	4.58
such as fish, meat and dairy products for							
my child.							
Provide children with a balanced and	0.0	3.3	9.3	29.3	58.0	0.797	4.42
varied diet that includes carbohydrate,							
protein, fruits and vegetables, especially							
when dining out.							
I prefer to cook at home rather than buy	0.7	0.7	8.0	26.7	64.0	0.730	4.53
food outside to be healthier and safer.							
I'll have a supply of home-cooked food	1.3	2.0	14.0	20.7	62.0	0.897	4.40
ready for the children.							
I will cook in a healthier way of preparation	1.3	2.0	16.0	28.0	52.7	0.900	4.29
like boiling and grilling.							
I make sure the children drink plenty of	0.0	2.0	6.0	29.3	62.7	0.702	4.53
water and limit their intake of sugary							
beverages.							
~							

<sup>\*</sup>Indicator: 1. Strongly Disagree 2. Disagree 3. Either disagreed or agreed 4. Agree 5. Strongly Agree

Table 4.9: Mean Score of Practice

Variable	Frequency	Percentage (%)	Mean	SD
Practice	AL.	AID	4.4630	0.59834
Low (1.00-2.33)	1	0.7		
Medium (2.34-3.67)	19	12.7		
High (3.68-5.00)	130	86.7		

### 4.1.6 Level of perceived behaviour control toward parental awareness of the nutritional intake to their children's growth.

The descriptive analysis result for perceived behaviour control of parents' awareness of nutritional intake for their children's growth is shown in table 4.10. It is about 46.7% of parents strongly agreed with the statement "I am knowledgeable in preparing nutritious meals to ensure my child grows up healthy and strong.", and 35.3% of parents who agree with the statement. Followed by 14.0% of parents either disagreed or agreed while the other 2.7% of parents who disagree and 1.3% of parents strongly disagree with the statement.

The result shows that 37.3% of parents strongly agree with the statement "It is very easy for me to make sure the kids take nutritious food", 36.7% of parents who agree with the statement and 20.7% of parents either disagreed or agreed about the statement. Followed by 4.0% of parents disagree with the statement while other that 1.3% of parents strongly disagree with the statement.

For the statement "I know to prepare a balanced eating plan recommended by the food pyramid for my kids." 47.3% of parents who strongly agree with the statement. Followed by 38.0% of parents agree with the statement. It is about 12.0% of parents who either disagreed or agreed with the statement and 2.7% of parents disagree with the statement.

"Monitoring my children's nutrition is easy" is the statement with the answer that 34.7% of parents strongly agree with the statement. About 33.3% of parents who agree of the statement, 19.3% of parents either disagreed or agreed about the statement. While

the other 12.0% of parents who disagree of the statement and also 0.7% of parents strongly disagree with the statement.

The result shows that 42.7% of parents strongly agree with the statement "It is very easy for me to measure my child's growth by calculating body mass index (BMI)", 34.7% of parents who agree with the statement, and 17.3% of parents either disagreed or agreed about the statement. Followed by 4.0% of parents disagree with the statement and also 1.3% of parents strongly disagree about the statement.

For the statement "I am always prepared my own food at home rather than purchasing it from a store." 50.7% of parents who strongly agree with the statement. Followed by 33.3% of parents agree with the statement. About 12.0% of parents who either disagreed or agreed with the statement and 4.0% of parents disagree with the statement.

According to Table 4.10 the statement "It is very easy for me to practice healthy lifestyle eating recommendations for my child", has 38.7% of parents agree with the statement, 37.3% of parents who strongly agree with the statement followed by 18.0% of parents either disagreed or agreed with the statement. While the other 5.3% of parents disagree with the statement.

For the statement "It is very easy for me to make sure my child consumes milk and dairy products on a daily basis as part of the daily diet", 44.0% of parents who strongly agree with the statement. Followed by 38.7% of parents agree with the statement. About 14.0% of parents who either disagreed or agreed with the statement and 3.3% of parents disagree with the statement.

Based on the result in Table 4.11 the mean score of perceived behaviour control toward parental awareness of the nutritional intake to their children's growth is considered

high mean score (M= 4.1517, SD=0.71867). According to the findings of Chen et al. (2020), a high level of behavioural control indicates that healthy maternal eating behaviours influence children's healthy eating behaviours in Australia. McKee et al. (2019), found that mothers with higher levels of perceived behavioural control were more likely to engage in healthy eating practices as well as predict maternal behaviour control fruit and vegetable intake in preschool children. Higher levels of behavioural control were linked to the child's consumption of fruits and vegetables.

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**Table 4.10:** Descriptive analysis for perceived behaviour control of parents about nutritional intake for the growth of their children

Statement		Pero	centage	(%)		SD	Mean
	1	2	3	4	5		
I am knowledgeable in preparing	1.3	2.7	14.0	35.3	46.7	0.886	4.23
nutritious meals to ensure my child							
grows up healthy and strong							
It is very easy for me to make sure the	1.3	4.0	20.7	36.7	37.3	0.929	4.05
kids take nutritious food.							
I know to prepare a balanced eating plan	0.0	2.7	12.0	38.0	47.3	0.784	4.30
recommended by the food pyramid for							
my kids.							
Monitoring my children's nutrition is	0.7	12.0	19.3	33.3	34.7	1.037	3.89
easy							
It is very easy for me to measure my	1.3	4.0	17.3	34.7	42.7	0.932	4.13
child's growth by calculating body mass							
index (BMI)							
I am always prepared my food at home	0.0	4.0	12.0	33.3	50.7	0.835	4.31
rather than purchasing it from a store.							
It is very easy for me to practice healthy	0.7	5.3	18.0	38.7	37.3	0.910	4.07
lifestyle eating recommendations for							
my child							
It is very easy for me to make sure my	0.0	3.3	14.0	38.7	44.0	0.814	4.23
child consumes milk and dairy products							
on a daily basis as part of the daily diet							
J J							

<sup>\*</sup>Indicator: 1. Strongly Disagree 2. Disagree 3. Either disagreed or agreed 4. Agree 5. Strongly Agree

Table 4.11: Mean score of perceived behaviour control

Variable	Frequency	Percentage (%)	Mean	SD
Perceived Behaviour	$\Lambda =$	VAC	4.1517	0.71867
Control				
Low (1.00-2.33)	2	1.3		
Medium (2.34-3.67)	36	24.0		
High (3.68-5.00)	112	74.7		

### 4.1.7 Level of subjective norm toward parental awareness of the nutritional intake to their children's growth.

The descriptive analysis result for subjective norm of parents 'awareness of nutritional intake for their children's growth is shown in table 4.12. It is about 59.3% of parents strongly agreed with the statement "My eating style has a huge influence on children's food selection styles.", and 33.3% of parents who agree with the statement. Followed by 4.7% of parents either disagreed or agreed while the other 2.0% of parents who disagree with the statement and also 0.7% of parents strongly disagree with the statement.

The result shows 51.3% of parents strongly agree with the statement "Advertising and television programs about healthy living influenced me to provide a balanced and nutritious diet to my child" and 34.7% of parents who agree with the statement. Followed by 12.7% of parents either disagreed or agreed while the other 1.3% of parents who disagree with the statement.

For the statement "The provision of free milk under the School Milk Program (PSS) by the government to primary school students is to help my child obtain balanced nutrition for physical and mental growth", 56.0% of parents who strongly agree with the statement. Followed by 28.3% of parents agree with the statement. It is about 13.3% of parents who either disagreed or agreed with the statement and 2.0% of parents strongly disagree with the statement.

According to the table 4.12 the statement "The role of the teacher in explaining to the students about healthy eating helped my child to more wisely choose healthy food",

has 59.3% strongly agree with the statement, 31.3% of parents who agree with the statement followed by 8.7% of parents either disagreed or agreed with the statement. While the other 0.7% of parents disagree with the statement.

"The healthy plate campaign inspired me to change towards healthy eating habits for children" is the statement with the answer that 58.0% of parents strongly agree with the statement. About 32.0% of parents who agree of the statement, 8.0% of parents either disagreed or agreed about the statement. While the other 2.0% of parents who disagree of the statement.

The result shows that 56.7% of parents strongly agree with the statement "I recognize that the Food Pyramid Guide assists me in selecting a balanced diet for children", 32.0% of parents who agree with the statement and 10.7% of parents either disagreed or agreed about the statement. Followed by 0.7% of parents disagree with the statement.

For the statement "The variety of healthy foods on the market helps me to prepare healthy and good food for my child's growth", 55.3% of parents who strongly agree with the statement. Followed by 36.0% of parents agree with the statement. It is about 6.7% of parents who either disagreed or agreed with the statement and 2.0% of parents disagree with the statement.

The result shows that 56.7% of parents strongly agree with the statement "Advice from a nutritionist influenced me to change healthier eating habits", 32.0% of parents who agree with the statement and 9.3% of parents either disagreed or agreed about the statement. Followed by 2.0% of parents disagree with the statement.

Based on the result in Table 4.13 the mean score of subjective norm toward parental awareness of the nutritional intake to their children's growth is considered high

mean score (M= 4.4392, SD=0.57360). According to the findings of McKee et al., (2019), higher scores indicated that parents had more positive subjective norms toward their child's healthy eating habits. Scaglioni et al. (2018), found that high levels of subjective norms of family role in children's healthy eating help children grow towards healthier by creating and promoting positive health behaviours through example, healthy food preparation, and encouragement to engage in healthy eating habits. Followed to the findings of a study conducted by Sultana in 2017, high-level subjective norms exist by which the government takes the initiative to produce media targeted specifically at parents, which is broadcast on television on a regular basis in collaboration with certain television programs. Nutrition talk shows, cooking techniques, and shopping for healthy results on a budget, among other things, are examples of content. Encouragement to engage in healthy eating habits, as well as healthy reparation.

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Table 4.12: Descriptive analysis for the subjective norm of parents about nutritional intake for the growth of their children

Statement Britain Style has a huge influence on 0.7 2.0 4.7 33.3 59.3 0.739 4.49 children's food selection styles. Advertising and television programs about 0.00 1.3 12.7 34.7 51.3 0.753 4.36 nealthy living influenced me to provide a balanced and nutritious diet to my child The provision of free milk under the School 0.00 2.0 13.3 28.7 56.0 0.792 4.39 Milk Program (PSS) by the government to brimary school students is to help my child obtain balanced nutrition for physical and mental growth.  The role of the teacher in explaining to the other should be one wisely choose healthy food.  The healthy plate campaign inspired me to 0.00 0.7 8.7 31.3 59.3 0.683 4.49 change towards healthy eating habits for children.  The recognize that the Food Pyramid Guide assists 0.00 0.7 10.7 32.0 56.7 0.710 4.45 me in selecting a balanced diet for children.  The variety of healthy foods on the market 0.00 2.0 6.7 36.0 55.3 0.710 4.45 helps me to prepare healthy and good food for my child's growth.	intake for the growth	h of the	eir chil	dren				
My eating style has a huge influence on 0.7 2.0 4.7 33.3 59.3 0.739 4.49 children's food selection styles.  Advertising and television programs about 0.00 1.3 12.7 34.7 51.3 0.753 4.36 healthy living influenced me to provide a balanced and nutritious diet to my child obtain balanced nutrition for physical and mental growth.  The role of the teacher in explaining to the students about healthy eating helped my child on more wisely choose healthy food.  The healthy plate campaign inspired me to change towards healthy eating habits for children.  The recognize that the Food Pyramid Guide assists 0.00 0.7 10.7 32.0 56.7 0.710 4.45 helps me to prepare healthy and good food for	tatement		Per	centage	(%)		SD	Mean
Children's food selection styles.  Advertising and television programs about 0.00 1.3 12.7 34.7 51.3 0.753 4.36 and the levision programs about 0.00 1.3 12.7 34.7 51.3 0.753 4.36 and the levision of free milk under the School 0.00 2.0 13.3 28.7 56.0 0.792 4.39 and the provision of free milk under the School 0.00 2.0 13.3 28.7 56.0 0.792 4.39 and the provision of the government to brimary school students is to help my child obtain balanced nutrition for physical and mental growth.  The role of the teacher in explaining to the other than the students about healthy eating helped my child to more wisely choose healthy food.  The healthy plate campaign inspired me to 0.00 2.0 8.0 32.0 58.0 0.729 4.46 and the change towards healthy eating habits for children.  The recognize that the Food Pyramid Guide assists 0.00 0.7 10.7 32.0 56.7 0.710 4.45 are in selecting a balanced diet for children.  The variety of healthy foods on the market 0.00 2.0 6.7 36.0 55.3 0.710 4.45 are prepare healthy and good food for		1						
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Milk Program (PSS) by the government to primary school students is to help my child obtain balanced nutrition for physical and mental growth.  The role of the teacher in explaining to the 0.00 0.7 8.7 31.3 59.3 0.683 4.49 students about healthy eating helped my child or more wisely choose healthy food.  The healthy plate campaign inspired me to 0.00 2.0 8.0 32.0 58.0 0.729 4.46 schange towards healthy eating habits for children.  The recognize that the Food Pyramid Guide assists 0.00 0.7 10.7 32.0 56.7 0.710 4.45 me in selecting a balanced diet for children.  The variety of healthy foods on the market 0.00 2.0 6.7 36.0 55.3 0.710 4.45 melps me to prepare healthy and good food for	ealthy living influenced me to provide a	0.00	1.3	12.7	34.7	51.3	0.753	4.36
students about healthy eating helped my child o more wisely choose healthy food.  The healthy plate campaign inspired me to 0.00 2.0 8.0 32.0 58.0 0.729 4.46 change towards healthy eating habits for children.  The recognize that the Food Pyramid Guide assists 0.00 0.7 10.7 32.0 56.7 0.710 4.45 me in selecting a balanced diet for children.  The variety of healthy foods on the market 0.00 2.0 6.7 36.0 55.3 0.710 4.45 melps me to prepare healthy and good food for	Milk Program (PSS) by the government to brimary school students is to help my child btain balanced nutrition for physical and	0.00	2.0	13.3	28.7	56.0	0.792	4.39
hange towards healthy eating habits for hildren.  recognize that the Food Pyramid Guide assists 0.00 0.7 10.7 32.0 56.7 0.710 4.45 he in selecting a balanced diet for children.  The variety of healthy foods on the market 0.00 2.0 6.7 36.0 55.3 0.710 4.45 helps me to prepare healthy and good food for	tudents about healthy eating helped my child	0.00	0.7	8.7	31.3	59.3	0.683	4.49
me in selecting a balanced diet for children.  The variety of healthy foods on the market 0.00 2.0 6.7 36.0 55.3 0.710 4.45 melps me to prepare healthy and good food for	hange towards healthy eating habits for hildren.			8.0		58.0		4.46
nelps me to prepare healthy and good food for	·	0.00	0.7	10.7	32.0	56.7	0.710	4.45
	•	0.00	2.0	6.7	36.0	55.3	0.710	4.45

<sup>\*</sup>Indicator: 1. Strongly Disagree 2. Disagree 3. Either Disagreed or Agreed 4. Agree 5. Strongly Agree

Table 4.13: Mean score of subjective norm

Variable	Frequency	Percentage (%)	Mean	SD
Subjective Norm		ALD	4.4392	0.57360
Low (1.00-2 <mark>.33)</mark>				
Medium (2.34-3.67)	20	13.3		
High (3.68-5.00)	130	86.7		

#### **4.2 Normality Test**

A normality test is used to see if sample data came from a population with a normal distribution (within some tolerance). Due to a large number of respondents (more than 50), a Kolmogorov-Smirnova was used in this study shown in Table 4.7. According to the test, parental awareness of the nutritional intake to their children's growth does not follow a normal distribution (P=0.000). Because the value is less than 0.05, all variables are dependent and the independent variable is not significant.

**Table 4.14: Tests of Normality** 

	Kolmo	gorov-Smi	rnov <sup>a</sup>	Shapiro-Wilk		k
	Statistic	df	Sig.	Statistic	df	Sig.
Parental awareness						
of the nutritional	0.540	150	0.000	0.172	150	0.000
intake to their	0.340	130	0.000	0.172	130	0.000
children's growth						
Knowledge	0.540	150	0.000	0.234	150	0.000
Attitude	0.521	150	0.000	0.390	150	0.000
Practice	0.515	150	0.000	0.411	150	0.000
Perceived behaviour control	0.460	150	0.000	0.566	150	0.000
Subjective norm	0.519	150	0.000	0.401	150	0.000

a. Lilliefors Significance Correction

#### 4.3 Correlation Analysis

In this section, correlation analysis is used to analyse the relationship of knowledge, attitude, practice, perceived behaviour control, and subjective norm towards parental awareness of the nutritional intake to their children's growth. Spearman correlation has been chosen to analyse this relationship.

#### 4.3.1 Spearman correlation

Spearman correlation coefficient were used to determine the relationship between the two variable (Schober, Boer & Schwarte, 2018). Spearman correlations were used to find relationships between knowledge, attitudes, practices, perceived behaviour control and subjective norm with parental awareness of the nutritional intake to their children's growth. The purpose of the correlations test is to measure the strength and direction of the relationship between the variables being studied (Thirumalai, Chandhini, and Vaishnavi, 2017).

The correlation coefficient is a statistical function of the strength of correlation between two continuous variables. There are several types of correlation coefficients, but the most common is the Spearman correlation coefficient, denoted by the symbol r. The values range from -1.0 to 1.0. A number greater than 1.0 or less than -1.0 indicates a correlation measure error. A perfect negative correlation is represented by a correlation of -0.0, while a perfect positive correlation is represented by a correlation of 1.0.

According to Meng, Jiang, Wang & Wei (2019), state a correlation of 0.0 indicates that there is no relationship between the movements of two variables. The size of the correlation coefficient was interpreted using the rule of thumb shown in the table below.

Table 4.15: Rule of Thumb for Interpreting the Size of a Correlation Coefficient

Size of correlation	<b>Interpretation</b>
0.90 to 1.00 (-0.90 to -1.00)	Very high positive (negative) correlation
0.70 to 0.90 (-0.70 to -0.90)	High positive (negative) correlation
0.50 to 0.70 (-0.50 to -0.70)	Moderate positive (negative) correlation
0.30 to 0.50 (-0.30 to -0.50)	Low positive (negative) correlation
0.00 to 0.30 (-0.00 to -0.30)	Negligible correlation

#### Adopted from Guildford (1973)

### 4.3.1.1 The relationship between knowledge with parental awareness of the nutritional intake to their children's growth in Malaysia.

In Table 4.16 the correlation coefficient between knowledge with parental awareness of the nutritional intake to their children's growth is significant at 0.286 level. The role in knowledge for interpreting the size of correlation coefficient in Table 4.15 shows a negligible correlation between knowledge with parental awareness of the nutritional intake to their children's growth. Meaning that the knowledge is negligible correlated and clinically unimportant relationship.

Contradicts with Prasetya, & Khomsan (2018), stated mothers 'knowledge of balanced nutrition was found to have a significant correlation with the nutritional status of primary school children. This indicates that knowledge has a high correlation with parents 'awareness of nutritional intake on their children's growth. This statement is also supported by Warkentin et al. (2018), stating parents 'knowledge of healthy eating where significant relationship has with children's eating behaviour. Thus, the accepted results of Hypothesis 1 predict that knowledge has a significant relationship with parents 'awareness of nutritional intake on their children's growth.

### 4.3.1.2 The relationship between attitudes with parental awareness of the nutritional intake to their children's growth in Malaysia

The correlation coefficient between attitudes with parental awareness of the nutritional intake to their children's growth is significant at 0.488 level in Table 4.16. The role in attitude for interpreting the size of correlation coefficient in Table 4.15 shows a low positive correlation between attitudes with parental awareness of the nutritional intake to their children's growth.

Mushonga et al. (2017), also found that the correlation between food intake and attitude was positive significant because the parents' nutritional attitudes were low and appeared to be significantly influenced by their dietary selection attitudes. In 2018, Albani et al. have revealed that parents' attitudes toward their children's fruit and vegetable consumption were significantly higher. This indicates that parents' awareness of their child's fruit and vegetable intake is linked to their attitudes. Contradict with Prasetya & Khomsan (2018), stated the mothers' attitude to balanced nutrition had no correlation

with awareness of nutritional intake on their children's growth. Therefore, the result is accepted Hypothesis 2 predicted that attitude has a significant relationship with parents 'awareness of nutritional intake on their children's growth

### 4.3.1.3 The relationship between practices with parental awareness of the nutritional intake to their children's growth in Malaysia

Table 4.16 shows that the correlation coefficient between practices and parental awareness of nutritional intake and children's growth is significant at the 0.361 level. Table 4.15 illustrates a low positive correlation between practices with parental awareness of nutritional intake to their children's growth using the rule of thumb for interpreting the size of a correlation coefficient.

According to Prasetya and Khomsan (2018), the mothers' practice of balanced nutrition had a significant correlation with the nutritional status of children's growth. This is proven by Mohamed Ahmed Ayed et al. (2021), there is a significant correlation impact of practices on the nutritional intake to their children's growth is positively related accepted. Scaglioni et al. (2018), also support that there is a significant positive between parental nutrition practice and an awareness of nutritional intake to the child. Therefore, the result is accepted Hypothesis 3 predicted that practices has a significant relationship with parents awareness of nutritional intake on their children's growth.

### 4.3.1.4 The relationship between perceived behaviour controls with parental awareness of the nutritional intake to their children's growth in Malaysia

Table 4.16 shows that the correlation coefficient between behavioural control perceptions and parents' awareness of their child's nutritional intake and growth was significant at the level (r = 0.228, p = 0.005) because the p-value was lower than the correlation value was significant at 0.01 level. The practical rules for interpreting the size of the correlation coefficient in Table 4.15 show a negligible correlation for which perceived behavioural control is significant with parents' awareness of nutrient intake to their children's growth.

This proved by Yarimoglu et al. (2019), that parents' eating habits have a significant positive influence on their children's eating habits. This indicates that perceived awareness is high when it comes to addressing children's eating habits. Followed by Lipkin, & Macias (2020), are also support there is a significant relationship between perceived behavioural control and parental awareness that providing a balanced diet and exposure to children can influence their growth and development. In 2019, McKee et al. also proved that perceived behavioural control was significantly higher towards mothers' awareness of their child's fruit and vegetable intake and unhealthy snacking behaviours and followed by Jadgal et al. (2020), stated the mean score of perceived behavioural control showed a significant increase in awareness of balanced nutrition that contributes to children's growth. Thus, the results of this study accepted Hypothesis 4, which predicted that perceived behavioural control had a significant relationship with parents' awareness of nutrient intake on their children's growth.

### 4.3.1.5 The relationship between subjective norms with parental awareness of the nutritional intake to their children's growth in Malaysia

The correlation coefficient is used to estimate the relationship between subjective norm and parental awareness of nutritional intake to their children's growth. In Table 4.16, the relationship between subjective norm and parental awareness of nutritional intake to their children's growth is significant at the 0.473 level. According to the rule of thumb for interpreting the size of a correlation coefficient in Table 4.15, the subjective norm with parental awareness of nutritional intake to their children's growth has a low positive correlation.

Hummel et al. (2018), proved that subjective norms in nutritional intake awareness can influence others, such as community members and family members, which is highly significant on the impact of balanced nutrition provision to children. Scaglioni et al. (2018), stated individuals have a very significant effect on being more likely to overeat while watching television and may learn unhealthy eating habits from advertisements and programs. The findings of a study from Yarimoglu et al. (2019), also support that subjective norms have a significant high impact on parents 'awareness of their eating styles that influence children's eating styles. Thus, the accepted results of Hypothesis 5 predict that subjective norms have a significant relationship with parents 'awareness of nutritional intake on their children's growth.

Table 4.16: The Spearman's Correlation Analysis

			CORRE	LATION				
			Awareness	Knowledge_Me	Attitude_Mea	n Practice_Mean	PBC_Mean	SN_Mea
			_Mean	an				n
Spearman's rho	Awareness_Mean	Correlation Coefficient	1.000	.286**	.488**	.361**	.228**	.473**
		Sig. (2-tailed)		.000	.000	.000	.005	.000
		N	150	150	150	150	150	150
	Knowledge_Mean	Correlation Coefficient	.286**	1.000	.266**	.167*	.064	.081
		Sig. (2-tailed)	.000		.001	.041	.440	.322
		N	150	150	150	150	150	150
	Attitude_Mean	Correlation Coefficient	.488**	.266**	1.000	.561**	.483**	.558**
		Sig. (2-tailed)	.000	.001		.000	.000	.000
		N	150	150	150	150	150	150
	Practice_Mean	Correlation Coefficient	.361**	.167*	.561**	1.000	.463**	.484**
		Sig. (2-tailed)	.000	.041	.000		.000	.000
		N	150	150	150	150	150	150
	PBC_Mean	Correlation Coefficient	.228**	.064	.483**	.463**	1.000	.372**
		Sig. (2-tailed)	.005	.440	.000	.000		.000
		N	150	150	150	150	150	150
	SN_Mean	Correlation Coefficient	.473**	.081	.558**	.484**	.372**	1.000
		Sig. (2-tailed)	.000	.322	.000	.000	.000	
		N	150	150	150	150	150	150

<sup>\*\*.</sup> Correlation is significant at the 0.01 level (2-tailed).

<sup>\*.</sup> Correlation is significant at the 0.05 level (2-tailed).

#### 4.4 Summary

This chapter discusses the findings of a study that validates the key variables of KAP theory and Theory of Planned Behaviour (TPB) in the context of parental awareness of the nutritional intake to their children's growth. Using KAP and TPB as a model, the results show that all independent variables have significant values for all variables. This suggests that KAP and TPB are effective models for predicting parental awareness of nutritional intake as it relates to their children's growth.

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#### **CHAPTER 5**

#### CONCLUSION AND RECOMMENDATION

#### 5.0 Conclusion

The first objective of this study is to determine the level of parental awareness of the nutritional intake to their children's growth. Second, to determine the level of parental knowledge, attitude, practice, perceived behaviour control, and subjective norm about the relation to parental awareness of nutritional intake and its impact on their children's growth. The third goal is to determine the relationship between parental nutritional awareness and their children's growth and knowledge, attitude, practice, perceived behaviour control, and subjective norm. All of the study's objectives had been met, and the conclusion had been reached.

The results were analysed using descriptive statistics, referring to the mean score of parental awareness of nutritional intake to their children's growth, knowledge, attitude, practices, subjective norm, and perceived behavioural control. The mean score of parental awareness of nutritional intake to their children's growth is high (M= 4.6987, SD=0.42268). The results for all independent variables show a high mean score with

result knowledge (M=2.7393, SD= 0.31790), attitude (M= 4.4783, SD=0.57177), practises (M= 4.4630, SD=0.59834), subjective norm (M= 4.4392, SD=0.57360), and perceived behavioural control (M= 4.1517, SD=0.71867).

Lastly, the third objective was to analyse the relationship between knowledge, attitudes, practices, perceived behavioural control, and subjective norms with parents 'awareness of nutritional intake on their children's growth. The results of the study revealed that all of the study's objectives were fulfilled, and conclusions were drawn.

#### 5.1 Recommendation

Several recommendations for improving future research work are made based on the findings and conclusions reached. First and foremost, the study can be conducted on parents of children as young as two years old, because it is difficult for parents to provide suitable and healthy food to their children at this age. In addition, I believe that this survey should include teachers or childcare centres, as most parents nowadays have jobs that require them to send their children to childcare centres. Furthermore, studies can be conducted by determining the relationship between demographics and independent variables such as parental income, as well as the KAP theory, which consists of knowledge, attitudes, and practices.

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#### **APPENDIX 1**



### PARENTAL AWARENESS OF THE NUTRITIONAL INTAKE TO THEIR CHILDREN'S GROWTH

KESEDARAN IBU BAPA DALAM PENGAMBILAN NUTRISI KEPADA PERTUMBUHAN ANAK MEREKA

#### **DEAR RESPONDENTS:**

- 1) This research is to:
  - i. To determine the level parental awareness of the nutritional intake to their children's growth in Malaysia
  - ii. To determine the level of knowledge, attitude, practice, perceived behaviour control and subjective norm towards parental awareness of the nutritional intake to their children's growth in Malaysia.
  - iii. To determine the relationship of knowledge, attitude, practice, perceived behaviour control and subjective norm towards parental awareness of the nutritional intake to their children's growth in Malaysia.
- 2) Please answer all questions.
- Thank you for your cooperation and information given.

#### Kepada responden:

- 1) Kajian ini adalah untuk:
  - i. Untuk mengetahui tahap kesedaran ibu bapa mengenai pengambilan nutrien terhadap pertumbuhan anak-anak mereka di Malaysia
  - ii. Untuk menentukan tahap pengetahuan, sikap, amalan, kawalan tingkah laku yang dirasakan dan norma subjektif terhadap kesedaran ibu bapa mengenai pengambilan nutrien terhadap pertumbuhan anak-anak mereka di Malaysia.
  - iii. Untuk menentukan hubungan pengetahuan, sikap, amalan, kawalan tingkah laku yang dirasakan dan norma subjektif terhadap kesedaran ibu bapa mengenai pengambilan nutrien terhadap pertumbuhan anak-anak mereka di Malaysia.
- 2) Sila jawab semua soalan.
- 3) Terima kasih di atas kerjasama dan maklumat yang berikan.

#### **QUESTIONAIRE/ SOAL SELIDIK**

#### SECTION A: DEMOGRAPHIC INFORMATION / MAKLUMAT DEMOGRAFI

Please tick (/) in the appropriated box to indicate your answer.

1.	Gender /jantina	☐ Male /lelaki ☐ Female /perempuan
2.	Age /umur	<ul> <li>&lt; 25 years/ tahun</li> <li>□ 25 – 35 years/ tahun</li> <li>□ 36 – 45 years / tahun</li> <li>□ &gt; 45 years/ tahun</li> </ul>
3.	Education Level /Peringkat pendidikan	<ul> <li>No Formal Education /Tiada Pendidikan</li> <li>Formal</li> <li>□ Primary School /Sekolah Rendah</li> <li>□ Secondary School /Sekolah Menengah</li> <li>□ Higher Education /Pengajian Tinggi</li> </ul>
4.	Race /Bangsa	☐ Malay /melayu ☐ Chinese /cina ☐ Indian /india ☐ Others, please state /lain, sila nyatakan:
5.	Occupation /Pekerjaan	<ul> <li>□ Public Sector /Sektor Awam</li> <li>□ Private Sector /Sektor Swasta</li> <li>□ Self-employed /Bekerja Sendiri</li> <li>□ Housewife /Suri rumah</li> </ul>
6.	Household Income /Pendapatan isi rumah	□ < RM 1000 □ RM 1001 − RM 2000 □ RM 2001 − RM 3000 □ > RM 3001
7.	Number of children /Bilangan anak	☐ 1 child /anak ☐ 2 child /anak ☐ 3 child /anak ☐ > 4 children /anak
8.	Experience of seeing a child nutritionist /Pengalaman berjumpa pakar pemakanan kanak-kanak	□ Yes/Ya □ No/Tidak

FYP FIAT

For the questions on **PART B, D, E, F and G** please read each item and **give your answer by circling the answer option that is appropriate** to the scale of 1 ( strongly disagree) to 5 scale (strongly agree).

Untuk soalan-soalan BAHAGIAN B, D, E, F DAN G, sila baca setiap item dan beri jawapan anda dengan membulatkan pada pilihan jawapan yang bersesuaian dengan mengikut skala 1 (sangat tidak bersetuju) hungga skala 5 (sangat setuju).

Strongly disagree / Sangat tidak setuju	Disagree / Tidak setuju	Average / Sederhana	Agree / Setuju	Strongly agree / Sangat setuju
1	2	3	4	5

### SECTION B: THE PARENTAL AWARENESS OF THE NUTRITIONAL INTAKE.

I a	m aware/ Saya sedar bahawa:	1	2	3	4	5
1.	Nutrition plays an important role in the physical and mental growth of my children.					
	Nutrisi memainkan peranan penting dalam pertumbuhan fizikal dan mental anak saya.					
2.	A balanced diet can supply all the nutrients that are essential for the development and growth of my child.  Diet seimbang dapat membekalkan segala nutrien yang sangat diperlukan untuk perkembangan dan tumbesaran anak saya.	I				
3.	Milk and dairy products such as yogurt and cheese supply essential nutrients such as calcium, potassium, phosphorus, protein, vitamin A and vitamin D that are needed for my child's growth.  Susu dan produk ternusu seperti yogurt dan keju membekalkan nutrient penting seperti kalsium, potassium, fosforus, protein, vitamin A dan vitamin D yang diperlukan untuk tumbesaran anak saya.	\ \ \				
4.	The importance of nutrient intake in the growth of children	V				

	Pentingnya pengambilan nutrien dalam tumbesaran anak-			ŀ
	anak.			
5.	The practice of providing healthy meals to children can			
	have a positive impact on their development.			L
	Tabiat <mark>memberika</mark> n hidangan berkhasiat dapat m <mark>emberi</mark>			
	kesan p <mark>ositif kepad</mark> a perkembangan anak-anak.			

#### SECTION D: ATTITUDE

In my	opinion / P <mark>ada pendapat sa</mark> ya	1	2	3	4	5
1.	I am very concerned about the importance of					
	balanced nutrients in my children's growth					
	Saya sangat mementingkan nutrient yang seimbang					
	dalam tumbesaran anak-anak saya.					
2.	I believe that a well-balanced diet rich in					
	carb <mark>ohydrates,</mark> proteins, fat, vitamins, and minerals					
	pro <mark>motes my ch</mark> ildren's growth					
	Saya <mark> percaya b</mark> ahawa diet seimbang yang kaya <mark>dengan</mark>					
	karb <mark>ohidrat, p</mark> rotein,lemak, vitamin, dan m <mark>ineral</mark>					
	mendorong pertumbuhan anak-anak saya.					
3.	I am implementing the concept of quarter, quarter,					
	and half nutrition in Malaysia healthy plate can help					
	my children overcome malnutrition.					
	Saya mengamalkan pemakanan konsep suku-suku	Α.				
	separuh dalam Pinggan Sihat Malaysia dapat mengatasi					
	masalah malnutrisi dalam kalangan anak-anak saya.					
4.	I am sensitive to my child's growth stage through	\				
	physical changes such as weight and height	7				
	Saya peka terhadap tahap tumbesaran anak saya melalui					
	perubahan fizikal seperti berat dan ketinggian					
5.	The calories consumed daily should be obtained from	ΛĬ				
	a variety of sources so that children get the nutrients					

	they need in amounts appropriate for their growth			
	and fitness.			
	Kalori yang dimakan setiap hari harus diperolehi			
	darip <mark>ada sum</mark> ber yang pelbagai agar anak <mark>-anak</mark>			
	men <mark>dapat nutri</mark> en yang diperlukan dalam jumla <mark>h yang</mark>			
	bers <mark>esuaian unt</mark> uk tumbesaran dan kecergasan me <mark>reka.</mark>			
6.	I will ensure a balanced diet selection and moderate			
	serving sizes so that my child gets an adequate source			
	of nutrition.			
	Saya akan memastikan pemilihan diet yang seimbang dan			
	saiz sajian yang sederhana supaya anak saya mendapat			
	sumber nutrisi yang mencukupi.			
7.	For an adequate food source, I provide a variety of			
	foods of different textures, colors and flavors to my			
	child.			
	Untu <mark>k sumber</mark> makan yang mencukupi, saya			
	men <mark>yediakan pe</mark> lbagai makanan yang berbeza t <mark>ekstur,</mark>			
	warn <mark>a dan rasa</mark> kepada anak saya.			
8.	I need to guide my child in the selection of balanced			
	foods according to daily needs.			
	Saya perlu membimbing anak saya dalam pemilihan			
	makanan yang seimbang mengikut keperluan harian	-		

#### **SECTION E: PRACTICES**

In my	opinion / Pada pendapat saya	1	2	3	4	5
1.	Prioritize a balanced diet every time preparing food					
	for children.					
	Mengutamakan makanan seimbang setiap kali menyediakan makanan untuk anak-anak	т				
2.	I make sure my chid take breakfast as a practice in	V				
	life.	1				
	Saya memastikan anak saya mengambil sarapan pagi					
	sebagai satu amalan dalam kehidupan.					

3.	Always ensure that my child consume high-fiber foods			
	to aid in the digestive process.			
	Sentiasa memastikan anak saya mengambil makanan			
	yang berserat tinggi bagi membantu proses			
	penghadaman dengan baik			
4.	Always provide adequate protein sources such as fish,			
	meat and dairy products for my child			
	Sent <mark>iasa berikan</mark> sumber protein seperti ikan, dagi <mark>ng dan</mark>			
	prod <mark>uk ternusu y</mark> ang mencukupi untuk anak saya			
5.	Provide children with a balanced and varied diet that			
	includes carbohydrate, protein, fruits and vegetables,			
	especially when dining out.			
	Berikan makanan seimbang dan bervariasi kepada anak			
	saya yang merangkumi karbohidrat, protein, buah-			
	buahan dan sayur-sayuran, terutama ketika makan di			
	luar.			
6.	I prefer to cook at home rather than buy food outside			
	to be healthier and safer.			
	Saya lebih gemar masak sendiri di rumah berbanding			
	membeli makanan di luar supaya lebih sihat dan selamat.			
7.	I'll have a supply of home-cooked food ready for the			
	children.			
	Saya akan menyiapkan anak-anak dengan bekal			
	mak <mark>anan yang d</mark> imasak sendiri di rumah.			
8.	I will cook in a healthier way of preparation like			
	boiling and grilling.			
	saya akan memasak dengan cara penyediaan yang lebih			
	sihat seperti merebus dan memanggang.			
9.	I make sure the children drink plenty of water and			
	limit their intake of sugary beverages.	1		
	Saya pastikan anak banyak minum air sambil			
	mengurangkan pengambilan minuman bergula			

#### SECTION F: PERCEIVED BEHAVIOUR CONTROL

In my	opinion / Pada pendapat saya	1	2	3	4	5
1.	I am knowledgeable in preparing nutritious meals to	V.				
	ensure my child grows up healthy and strong	N				
	Saya berpengetahuan dalam menyediakan makan yang	V-, Y.				
	bernutristi dalam menjamin anak saya membesar sihat					
	dan kuat					

2.	It is very easy for me to make sure the kids take			
	nutritious food.			
	Amat mudah bagi saya memastikan anak-anak			
	mengambil makanan yang bernutrisi.			
3.	I know to prepare a balanced eating plan			
	reco <mark>mmended</mark> by the food pyramid for my kids.			
	Say <mark>a tahu me</mark> nyediakan pemakanan seimbang <mark>yang</mark>			
	disa <mark>rankan oleh</mark> piramid makana untuk anak-ana <mark>k saya</mark>			
4.	monitoring my children's nutrition is easy			
	mem <mark>antau pemak</mark> anan anak-anak saya adalah <mark>mudah</mark>			
5.	It is very easy for me to measure my child's growth by			
	calculating body mass index (BMI)			
	Amat mudah bagi saya mengukur tumbesaran anak saya			
	dengan mengir <mark>a indeks jisim tu</mark> buh <mark>nya (BMI)</mark>			
6.				
	than purchasing it from a store.			
	Saya selalu menyediakan makanan sendiri di rumah			
	berban <mark>ding membeli ma</mark> kanan di kedai			
7.	It is very easy for me to practice healthy lifestyle			
	eating recommendations for my child			
	Ama <mark>t mudah</mark> bagi saya mempraktikan cad <mark>angan</mark>			
	pem <mark>akanan gay</mark> a hidup sihat untuk anak saya			
8.	It is very easy for me to make sure my child consumes			
	milk and dairy products on a daily basis as part of the			
	daily diet			
	Amat mudah bagi saya untuk memastikan anak saya			
	mengambil susu dan hasil tenusu setiap hari sebagai			
	sebahagian daripada diet harian			

#### **SECTION G: SUBJECTIVE NORM**

In my	opinion / Pada pendapat saya	1	2	3	4	5
1.	My eating style has a huge influence on children's	Y				
	food selection styles.  Gaya pemakanan saya memberi pengaruh yang besar terhadap gaya pemilihan makanan anak-anak.					
2.	Advertising and television programs about healthy living influenced me to provide a balanced and nutritious diet to my child	V				

	<del>,</del>		<del> </del>	 		٦_
'	Iklan dan program televisyen mengenai cara hidup sihat					
'	mempengaruhi saya untuk menyediakan makanan yang					
<u> </u>	seimbang dan bernutrisi kepada anak saya					
3.	The provision of free milk under the School Milk			.	_	
	Program (PSS) by the government to primary school					
	stud <mark>ents is to h</mark> elp my child obtain balanced nu <mark>trition</mark>					
	for physical and mental growth.					
	Pem <mark>berian sus</mark> u percuma dibawah Program <mark>Susu</mark>			,		
	Seko <mark>lah (PSS)</mark> oleh kerajaan kepada murid s <mark>ekolah</mark>					
	rend <mark>ah membantu</mark> anak saya memperolehi nutr <mark>isi yang</mark>					
'	seimbang untuk tumbesaran fizikal dan mental.					
4.	The role of the teacher in explaining to the students					
	about healthy eating helped my child to more wisely					
	choose healthy food					
	Peranan guru dalam memberikan penerangan kepada					
<b>,</b>	murid mengenai pemakanan yang sihat membantu anak					
	saya untuk lebih bijak memilih makanan yang sihat	<u> </u>				
5.	The healthy plate campaign inspired me to change			.	_	
	towards healthy eating habits for children.					
<b>,</b>	Kempen pinggan sihat memberi inspirasi kepada saya					
<b>,</b>	untu <mark>k menguba</mark> h ke arah tabiat pemakanan yan <mark>g sihat</mark>					
	untu <mark>k anak-ana</mark> k.					
6.	I re <mark>cognize that</mark> the Food Pyramid Guide assists me in					
	sele <mark>cting a bal</mark> anced diet for children.					
	Saya sedar Panduan pyramid makanan membantu saya					
	dalam memilih diet yang seimbang untuk anak-anak.					
7.	The variety of healthy foods on the market helps me	Ī		.	_	
	to prepare healthy and good food for my child's	_				
'	growth Kepelbagai makanan sihat di pasaran membantu					
	saya untuk meyediakan makanan sihat dan baik untuk	1				
	tumbesaran anak saya					
8.	6			.		
'	healthier eating habits					
	Nasihat daripada pakar pemakanan mempengaruhi saya					
	untuk mengubah tabiat permakanan yang lebih sihat					

## KELANTAN

For the questions on **PART** C please read each item and **give your answer by circling the answer option that is appropriate** to the scale of 1 (don't know), scale 2 (not sure) and scale 3 (know)

Untuk soalan-soalan BAHAGIAN C, sila baca setiap item dan beri jawapan anda dengan membulatkan pada pilihan jawapan yang bersesuaian dengan mengikut skala 1 (tidak tahu), skala2 (tidak pasti) dan skala 3 (tahu).

Don't know / Tidak tahu	Not sure / Tidak Pasti	Know / Tahu
1	2	3

#### **SECTION C: KNOWLEDGE**

		1	2	3
1.	Malnutrition refers to a lack, excess or imbalance in a person's energy or nutrient intake that causes stunted growth, weight loss, overweight and obesity.  Malnutrisi merujuk kepada kekurangan, berlebihan atau ketidakseimbangan dalam pengambilan tenaga atau nutrien seseorang yang menyebabkan bantut, susut, berat berlebihan dan obesity.			
2.	Parents need to provide carbohydrate sources such as rice, cereal products and tubers as much as 50% of the total daily caloric intake of children.  Ibu bapa perlu memberikan sumber karbohidrat seperti nasi, produk bijirin dan ubi-ubian sebanyak 50% daripada jumlah pengambilan kalori harian anak-anak			
3.	A variety of foods such as carbohydrates, proteins, fats, vitamins and minerals are needed to ensure that children get all the nutrients they need every day.  Kepelbagaian makanan seperti karbohidrat, protein, lemak, vitamin dan mineral diperlukan bagi memastikan anak-anak mendapat semua nutrient yang diperlukan setiap hari.			
4.	Micronutrients are vitamins and minerals that are needed in moderate quantities to continue to support the growth of children.  Mikronutrien ialah vitamin dan mineral yang diperlukan dalam kuantiti sederhana untuk terus menyokong tumbesaran anakanak			

5.	A balanced diet is the intake of enough food for the body's
	needs
	Makanan seimbang ialah pengambilan makanan yang cukup
	untuk keperluan tubuh badan.
6.	A child's health will be impacted by frequent late-night
	eating and high-calorie food consumption.
	Kes <mark>ihatan ana</mark> k-anak akan terjejas oleh makan lewat malam
	yan <mark>g kerap dan</mark> pengambilan makanan berkalori <mark>tinggi.</mark>
7.	Lack of malnutrition caused my child's growth to stunted
	Kek <mark>urangan ma</mark> lnutrisi menyebabkan kadar tu <mark>mbesaran a</mark> nak
	saya terbantut.
8.	Milk is a high quality protein that is essential for cell growth,
	regeneration and repair of body tissues.
	Susu adalah protein berkualiti tinggi yang penting untuk
	pertumbuhan sel, tumbesaran dan membaikpulih tisu-tisu tubuh.
9.	Vegetables and fruits are very helpful in the digestive process
	of children
	Sayur-sayuran dan buah-buahan sangat membantu dalam
	proses penghadaman kanak-kanak

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10 Consumption of 6 to 8 glasses of water a day is important for

Pengambilan air 6 hingga 8 gelas sehari penting bagi kanakkanak yang aktif bagi mengelakkan kesan daripada dehidrasi

active children to avoid the effects of dehydration

THANK YOU SO MUCH FOR YOUR GENUINE PARTICIPATION IN THIS STUDY.

MALAYSIA KELANTAN

#### **APPENDIX 2**





## MALAYSIA KELANTAN