



UNIVERSITI PUTRA MALAYSIA

***ASSOCIATIONS OF PARENTS' STAGES OF CHANGE IN INCREASING
FRUIT AND VEGETABLE, FEEDING STYLE AND FOOD SECURITY ON
FRUIT AND VEGETABLE INTAKE AMONG CHILDREN IN SERDANG,
SELANGOR***

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FPSK6 2020 28**

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SELANGOR**

BY

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A project submitted as a partial fulfilment of the requirement for the degree of
Bachelor of Science (Dietetics) from the Faculty of Medicine and Health Sciences,
Universiti Putra Malaysia.

This project entitled “Associations of parent’s stages of change in increasing fruit and vegetable, feeding style and food security on fruit and vegetable intake among children in Serdang, Selangor” was prepared by Nur Shameera binti Mohd Sharil and submitted to the Faculty of Medicine and Health Sciences as a partial fulfillment of the requirement for the degree of Bachelor of Science (Dietetics) from the Faculty of Medicine and Health Sciences, Universiti Putra Malaysia.



Received and examined by

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Date:

ACKNOWLEDGEMENT

Firstly, I would like to express my gratitude towards my supervisor, Dr Norbaizura Md Yusop for the opportunity to conduct this research. Thank you for her guidance and support throughout this research.

Next, I would like to express my gratefulness to the senior assistant of afternoon session of SK Serdang, Puan Fazlynn and administration assistant of SK Taman Sungai Besi Indah, Encik Zakaria for allowing me to conduct data collection in the schools. Not to forget, Cikgu Dayang for helping me during the data collection at SK Taman Sungai Besi Indah. I am also thankful to all the participants for their cooperation during the data collection.

Last but not least, I would like to thank my teammates, Fransheyno Pie Paitolno and Nurfarhana Sahira binti Rosly for helping me during data collection. A special thank to my parents for supporting me emotionally throughout this research.

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ABSTRACT

ASSOCIATION OF PARENTS' STAGES OF CHANGE IN INCREASING FRUIT AND VEGETABLE, FEEDING STYLE AND FOOD SECURITY ON FRUIT AND VEGETABLE INTAKE AMONG CHILDREN IN SERDANG, SELANGOR

NUR SHAMEERA BINTI MOHD SHARIL

Introduction: Fruit and vegetable consumption among Malaysian is alarming. More than one fifth of Malaysian children do not achieved recommended servings of fruit and vegetable. The objective of this study is to determine the association between parent's stages of change for increasing fruit and vegetable, feeding style and food security with fruit and vegetable intake among school children aged 7 to 8 years old.

Methods: A cross-sectional study was conducted in SK Sri Serdang, Selangor. Ethical approval was obtained from the Research Committee (JKEUPM) and Ministry of Education. Consent form was given to the parents for permission. Stages of change was assessed using two- step algorithm, feeding style was assessed using Parental Feeding Style Questionnaire (PFSQ), food security was assessed by Six Item Food Security Scale and fruit and vegetable intake was measured by 24hr diet recall. Statistical analysis was conducted by IBM SPSS 22. **Results:** A total of 40 students participated in this study. 60% of the students has <2 servings of fruit and vegetable intake. A significant association was found in stages of change and food security with fruit and vegetable intake. **Conclusion:** Fruit and vegetable intake among school children is still inadequate and measures need to be taken to improve overall fruit and vegetable intake.

CHAPTER 1

1.1 Research background

Fruit and vegetable are highly recommended in daily diets due to their health-promoting characteristics and benefits. Fruit and vegetable are rich in vitamins such as vitamin A, vitamin C and vitamin D. They are also rich with minerals such as magnesium and zinc. These vitamins and minerals are some important elements for the body. In addition, phytochemicals such as antioxidants provide numerous benefits as it eliminates the free radicals from the body and also prevent oxidation damage. Besides, fruit and vegetable are rich in dietary fiber, and fiber intake is associated with lower incidence of cardiovascular disease and obesity (Slavin & Lloyd, 2012). According to key message five in Malaysian Dietary Guidelines (2013), children at the age of 7 to 18 years old are recommended to eat three servings of vegetable and two servings of fruit daily. In a local study, on average, Malaysian children consumed only 0.91 and 1.07 servings of fruit and vegetable per day, respectively and less than one-fifth of the children achieved the daily recommended servings of fruit which is 11.7% and vegetable which is 15.8% (Chong et al., 2017). Thus, Malaysian children do not have an adequate intake of fruit and vegetable.

Parents play a vital role in shaping children's dietary intake as well as their eating behavior. Children are influenced by their parents because in their early years, parents are the one who hold the decision power in what their children eating. Parents are the one who shape children's like and dislike of certain foods such as fruit and vegetable. One of the factors that may influence the fruit and vegetable intake among

children is the parents' stages of change according to The Transtheoretical Model. This model includes five stages that are important in order to make changes in life. The five stages of this model are precontemplation, contemplation, preparation, action, maintenance and termination or relapse. To start a change or to make a change, one needs to evaluate the stages of change in order to lead a successful lifestyle that one desired. To encourage the children in eating fruit and vegetable, parent's need to be ready to change their eating pattern because their eating pattern will influence the children.

Feeding style or feeding practices is a practice of the parents to directly influence their children's eating behavior and eating pattern. Parents play an important role in shaping children's eating behaviors, through feeding styles and parenting styles (Wang, 2017). Parents have been feeding their children since their children are newborn. Hence, the possibility of the children following their parents' eating pattern is higher. Feeding style of the parents starts from the birth of their child until the child can independently select their foods and have their own food preference; likes and dislikes in foods. This shows that the time period where the parents feed their children takes years and eventually the children will be used to eat food that their parents eat. For example, if the parents start to feed their child with fruit and vegetable at a young age, they may develop pattern of eating fruit and vegetable when they grow up. Hence, parenting style has a huge impact on determining the consumption of fruit and vegetable among their children.

Food security is the measure of the availability of food and individuals' ability to access those food. The access to fruit and vegetable is important in the consumption

of fruit and vegetable in daily diet. If the food secure rate is higher, the fruit and vegetable intake in daily diet will be higher. In contrary, if there is limited access to fruit and vegetable, hence the intake in daily diet will be lower. Therefore, it is vital for parents to have great access to fruit and vegetable in order to encourage and promote intake among their children.

1.2 Problem Statement

Fruit and vegetable intake is becoming a concern in the society where society nowadays are prone towards fast food and processed food especially school children at the age of 7-12 years old. Among older children which are preschoolers and school children, dietary fiber (7.4g, 9.4g) did not meet recommendations while energy percentage from total fat and saturated fats exceeded 30% and 10%, respectively (Shariff et al., 2015). As fruit and vegetable are one of the sources of fiber, this indicates that children include less fruit and vegetable in their diet.

The dietary intake including the consumption of fruit and vegetable among children is greatly influenced by their parents. Thus, this study will provide baseline data on how the parents' stages of change, feeding style and food security associate with the fruit and vegetable intake in Serdang, Selangor. By providing baseline data, this study will give advantages for other upcoming research.

There is also limited studies regarding parents' stages of change and the association with the fruit and vegetable intake. Thus, by conducting this study, the

association between fruit and vegetable intake and parents' stages of change can be analyzed.

1.3 Research Questions

1. What are the stages of change in increasing fruit and vegetable, feeding style and food security of the parents among school children in Serdang, Selangor ?
2. How parents' stages of change in increasing fruit and vegetable, feeding style and food security associate with the fruit and vegetable intake among school children in Serdang, Selangor ?

1.4 Significance of Study

This study provide baseline data on parents' stages of change in increasing fruit and vegetable, feeding style as well as food security in influencing the fruit and vegetable intake among school children. This data can be used for future research and intervention on fruit and vegetable intake among school children. This study will help to show how parents' stages of change in increasing fruit and vegetable, feeding style and food security associate with fruit and vegetable intake among children.

This study also create a better understanding on how the stages of change in increasing fruit and vegetable, feeding style and food security can affect or influence fruit and vegetable intake among children. The data and findings in this study can be

used to provide strategies in the effort to increase the fruit and vegetable intake among children.

1.5 Objectives

1.5.1 General Objective

To determine the association between parent's stages of change in increasing fruit and vegetable, feeding style and food security on the fruit and vegetable intake among school children in Serdang, Selangor.

1.5.2 Specific Objectives

1. To determine parents' stages of change in increasing fruit and vegetable, feeding style and food security of household.
2. To determine the fruit and vegetable intake among school children.
3. To determine the association of the parents' stages of change in increasing fruit and vegetable, feeding style and food security on the fruit and vegetable intake among children.

1.5.3 Hypothesis

1.5.3.1 Null Hypothesis

1. There is no significant association between parent's stages of change in increasing fruit and vegetable with fruit and vegetable intake.

2. There is no significant association between feeding style and fruit and vegetable intake.

3. There is no significant association between food security and fruit and vegetable intake.

1.5.3.2 Alternative Hypothesis

1. There is an association between parents' stages of change in increasing fruit and vegetable and fruit and vegetable intake among children in Serdang, Selangor.

2. There is an association between feeding style and the fruit and vegetable intake among children in Serdang, Selangor.

3. There is an association between food security and the fruit and vegetable intake among children in Serdang, Selangor.

1.6 Conceptual Framework

Figure 1.1 shows the conceptual framework that shows the association of parent's stages of change in increasing fruit and vegetable, feeding style, food security and fruit and vegetable intake among school children.

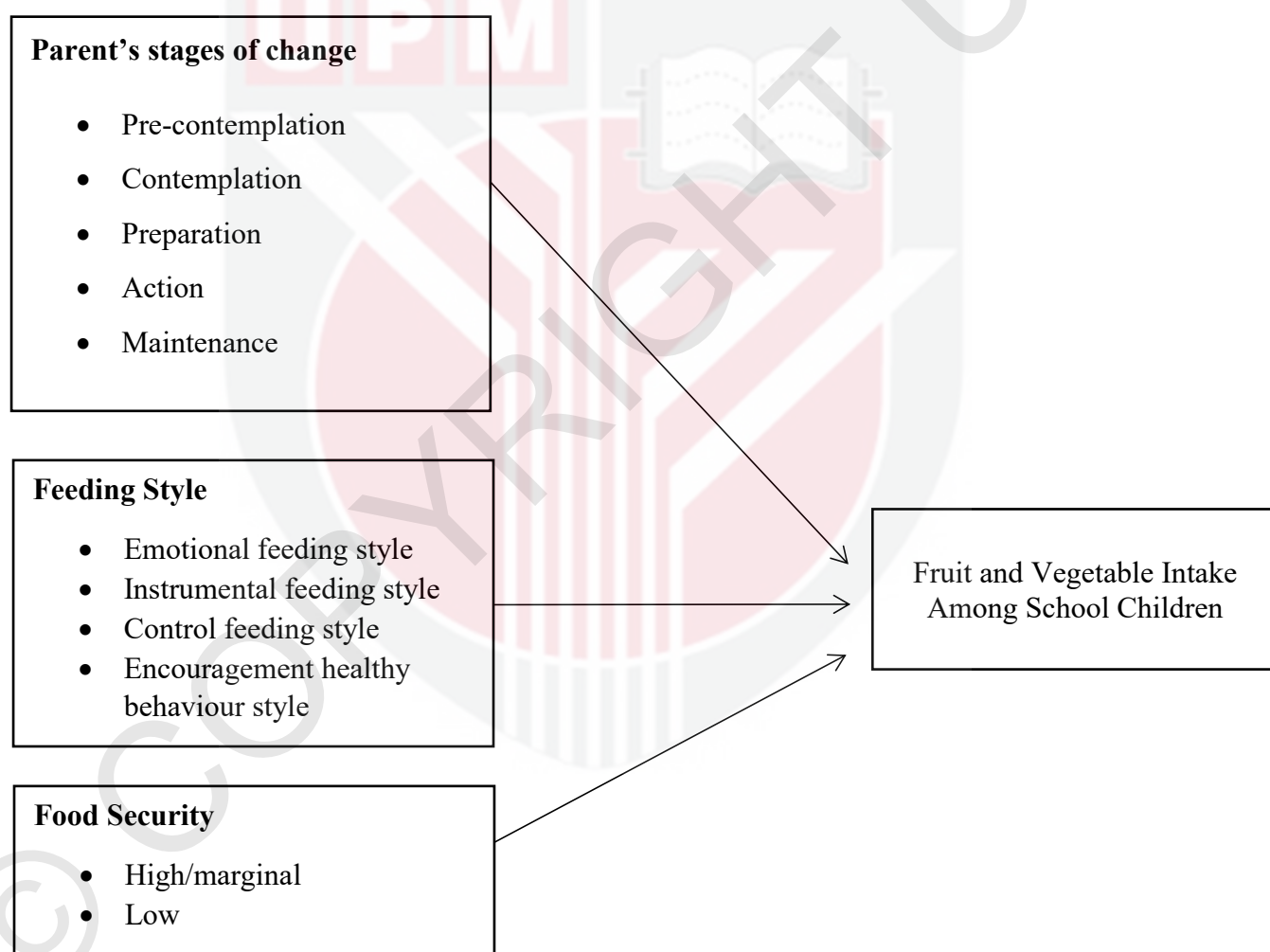


Figure 1. 1 Conceptual framework

CHAPTER 2

2.1 Recommendations of fruit and vegetable

According to *Pinggan Sihat Malaysia*, people are recommended to fill their plates with a quarter of carbohydrate, a quarter of protein and a half full of fruits and vegetables. This is to increase the awareness on how important the fruits and vegetables are. Normal adults are recommended to eat plenty of fruits and vegetables daily (Malaysian Dietary Guidelines, 2010).

Normal adults should consume five servings (400g/day) of fruit and vegetable per day (WHO, 2003). As for children below the age of seven years old, it is recommended to consume two servings of vegetable and two servings of fruit per day. For children at the age of 7 to 18 years old, it is recommended for them to include at least three servings of vegetable and two servings of fruit in their diet daily (Ministry of Health, 2013).

2.2 Benefits of fruit and vegetable

Fruits and vegetables have tremendous amount of benefits as they are recognized as the health-promoting foods. Fruits and vegetables have high concentration of vitamins such as vitamin C. They also have high concentration of minerals especially in electrolytes such as potassium. Fruits and vegetables contain phytochemicals with abundance of antioxidants and polyphenolics. Besides, they have low energy density. Fruits and vegetables are also rich in dietary fiber, and fiber intake is associated with lower incidence of cardiovascular disease and obesity (Slavin & Lloyd, 2012).

Fruits and vegetables are also known as foods that help in disease prevention. A compound found in plants named phytochemicals have been known to reduce the risk of getting chronic diseases such as cancer. These phytochemicals have strong antioxidants and antiproliferative activities. These two create a synergistic effect which produces anticancer activities which is a benefit in reducing cancer cell growth and the multiplication of cancer cells (Liu, 2004).

2.3 Stages of change

Stages of change is professionally known as The Transtheoretical Model (TTM) is developed in the 1980s and is the dominant stage model in health psychology and health promotion. TTM has been used in studies of smoking cessation and also applied to a wide range of health behaviors (Prochaska et al., 1994). The transtheoretical model provides the basic organizing principle and this model specifies five stages which are pre-contemplation, contemplation, preparation, action and maintenance (Sutton, 2014).

Precontemplation is where the individual is not aware of their problems or situations while contemplation is where the individual is aware of their problems or situations but has a lack of action. As for preparation, the individual is ready to change in the next 30 days and they believe that they can strive for change. Action is where the individual has started to change for the last few months and is currently continuing their effort and plan while maintenance is where the individual maintains their behavior change. Last but not least, termination or relapse where termination is the

desire of the individual not to return to their previous state or relapse is when the individual return back to their previous state.

A study by LaMorte (2018), The Transtheoretical Model (TTM) focuses on an individual's decision making. TTM is also a model of intentional change. This model operates on the assumption of people change slowly and indecisively. They change in habitual behavior and is a cyclic process. The theory however have some limitations which are it ignores social context, the lines between stages can be subjective, no time needed in for each stage and TTM assumes individuals make coherent and logical plans.

2.4 Feeding style

Feeding style refers to the feeding behavior practised by parents towards their child and this can influence the child's dietary pattern. There are four dimensions in feeding styles which are instrumental feeding, emotional feeding, control feeding and encouragement towards healthy behavior. Instrumental and emotional feeding style are associated with unhealthy eating pattern while control feeding and encouragement towards healthy behavior are associated with healthy eating pattern. Instrumental feeding is a feeding style which parents will reward their children with food for correct behavior and punish them by taking away the food for their misbehavior (Mason, 2015).

Instrumental and emotional feeding style contribute to a higher risk of snacks consumption among children (Sleddens et al., 2010). High in snacks consumption

leads to child obesity and may have severe complication in life later on. A study conducted in Hong Kong, control feeding style is associated with higher fruit and vegetable consumption. There were significant association between all the feeding styles (instrumental, emotional, encouragement and control) and FV intake (Lo et al., 2015).

2.5 Food security

Food security is defined as the access and provision to sufficient nutritious and culturally accepted foods by the household for a healthy life (Abdullah et al., 2019). Hence, food security is an important factor in encouraging healthy eating pattern as it contributes to the food access and availability in a household. A study between fourth graders, parents with low food security households consume more fruit than the high or marginal food security households (Grutzmacher, 2011). The study also found that students with very low food security households that were not involved in school nutrition programs, consumed the lowest vegetable in their diet.

CHAPTER 3

3.1 Study Design

A cross-sectional study had been conducted to determine the association between parents' stages of change, feeding style and food security with the fruit and vegetable intake among school children in Serdang, Selangor.

3.2 Study Location

This study was conducted in Selangor. There were nine districts in Selangor with a total of 661 primary schools (Selangor State Education Department, 2019). *Petaling Perdana* district was chosen for this study to be carried out. The target locations for data collection were three primary schools in Serdang area, which were Sekolah Kebangsaan Sri Serdang, Sekolah Kebangsaan Taman Sungai Besi Indah and Sekolah Kebangsaan Taman Universiti. However, due to pandemic, this study was able to be conducted in SK Sri Serdang only.

3.3 Sampling Design

Figure 3.1 shows the sampling design flow chart. The method used in this study to select the location and sample for data collection was multistage sampling method. *Petaling Perdana* was chosen out of all the nine districts in Selangor. Then, a list of national primary schools (n=59) was obtained and only three schools were selected

for data collection by using purposive sampling method but the data collection was only conducted in SK Sri Serdang. Next, two classes from each year (Year 1 to Year 5) were chosen by using simple random sampling. The respondents then were selected based on the inclusion and exclusion criteria.

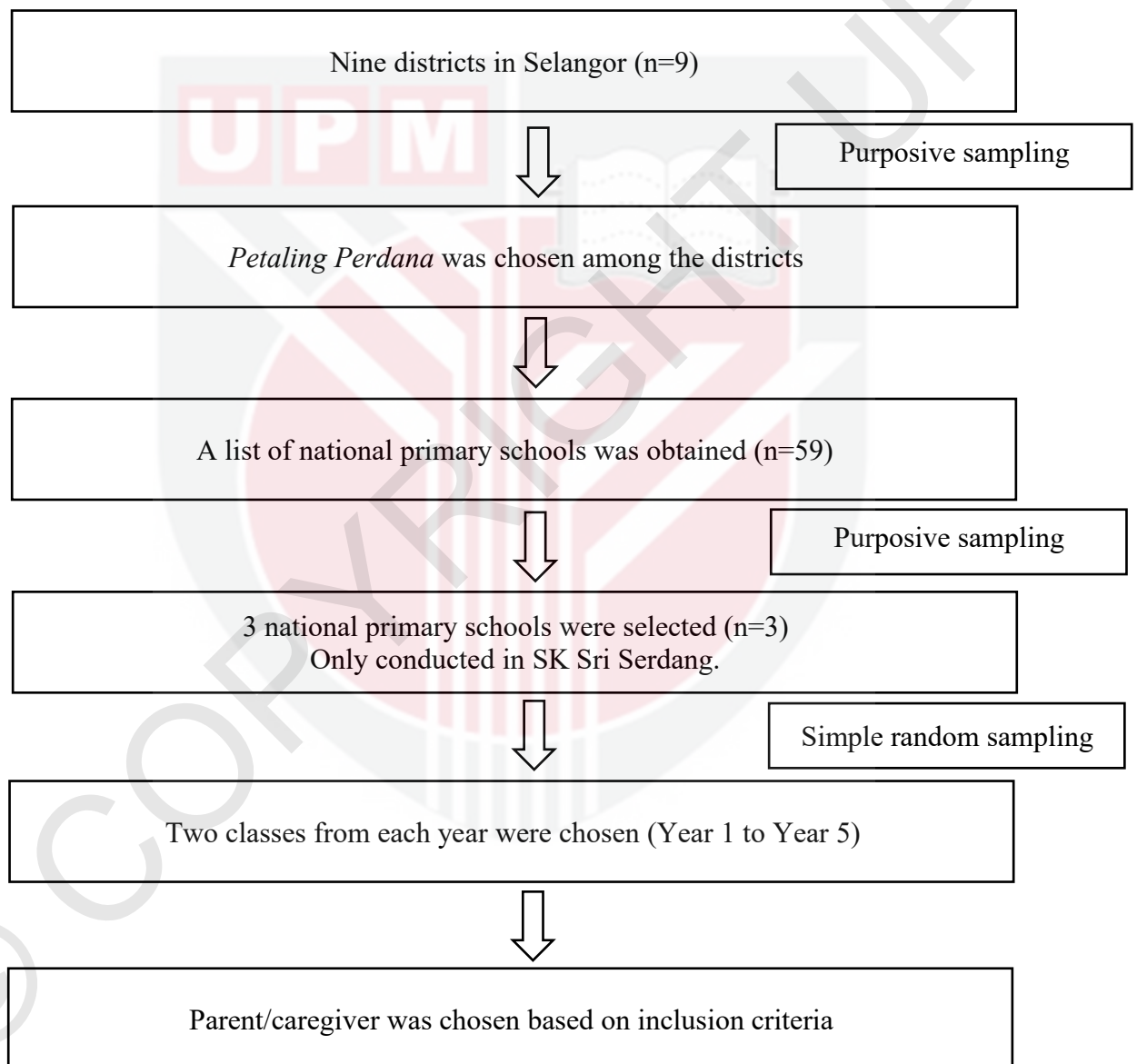


Figure 3. 1 Sampling design flow chart

3.4 Sample Size

Sample size in correlation study is shown as below based on Hulley, Cummings, Browner, and Newman (2013):

$$N = [(Z\alpha + Z\beta)/C]^2 + 3$$

$$C = 0.5 * \ln[(1+r)/(1-r)]$$

$$C = 0.5$$

Where,

The standard normal deviate for $\alpha = Z\alpha = 1.96$

The standard normal deviate for $\beta = Z\beta = 0.84$ (80%)

r = the expected correlation coefficient

Correlation studies	Correlation, r	Sample size
Feeding style and fruit and vegetable intake	r= -0.17	$C = 0.5 * \ln[(1+r)/(1-r)]$ $= 0.5 * \ln[(1-0.17)/(1+0.17)]$ $= -0.17$ $N = [(Z\alpha + Z\beta)/C]^2 + 3$ $= [1.96+0.84/-0.17]^2 + 3$ $= 274$
	r= -0.16	$C = 0.5 * \ln[(1+r)/(1-r)]$ $= 0.5 * \ln[(1-0.16)/$

<p>(Wardle et al.,2005)</p>	<p>$r= 0.57$</p>	$(1+0.16)$ $= -0.16$ $N = [(Z\alpha + Z\beta)/C]2 + 3$ $=$ $[1.96+0.84]/-0.16]2 + 3$ $= 303$
<p>(Sleddens et al., 2010)</p>	<p>$r=0.28$</p>	$C = 0.5 * \ln[(1+r)/(1-r)]$ $= 0.5 * \ln[(1+0.57)/$ $(1-0.57)]$ $= 0.648$ $N = [(Z\alpha + Z\beta)/C]2 + 3$ $=$ $[1.96+0.84]/0.648]2 + 3$ $= 22$
<p>Fruit and vegetable security and fruit and vegetable intake</p> <p>(Cullen, 2001)</p>	<p>$r=0.28$</p>	$C = 0.5 * \ln[(1+r)/(1-r)]$ $= 0.5 * \ln[(1+0.28)/$ $(1-0.28)]$ $= 0.29$ $N = [(Z\alpha + Z\beta)/C]2 + 3$ $= [1.96+0.84]/0.29]2$ $+ 3$ $= 96$

Table 3. 1 Calculation of sample size

Thus,

$$C = 0.5 * \ln[(0.28)/(1-0.28)]$$

$$= 0.29$$

$$N = [(1.96 + 0.84)/(0.29)]^2 + 3$$

$$= 96$$

$$N = 96 + (20\% \times 96)$$

$$= 115 \text{ subjects}$$

After considering non-response rate, the total subjects in this study was originally 115 subjects. However, this study managed to recruit only 40 subjects but still achieved the minimum sample size.

3.5 Study Subjects

The subjects were the parents/caregiver of the students Year 1 to Year 5 in SK Sri Serdang. Parents/caregiver who met these inclusion and exclusion criteria were eligible to participate in this study, as shown in Table 3.2. The inclusion criteria included Malaysian citizen, male and female and parents/caregiver of students at the age of 7 to 11 years old. Twelve years old students were excluded due to UPSR examination. Parents/caregiver who were not willing to participate in this study; did not sign the consent form were included in exclusion criteria.

Inclusion criteria	Exclusion criteria
Malaysian citizen	Parents/caregiver who were not willing to participate in this study
Male & female	
Parents/caregiver of students at the age of 7 to 11 years old	

Table 3. 2 Inclusion and exclusion criteria of subjects

3.6 Study Measures

3.6.1 Parents' stages of change

The stages of change was classified using two-step of algorithm (Hildebrand, 2007). The subjects were given two-step algorithm questionnaire to assess the stages of change. For the first step of the algorithm, the subjects needed to answer scale from zero to nine on how many servings of fruit and vegetable they serve for their family. For the second step of the algorithm, the classification of stages of change of the subjects, (pre-contemplation, contemplation, preparation, action and maintenance) were determined by the number of servings of fruit and vegetable consumed by the subjects. Subjects that serve four or less (≤ 4) servings per day were classified into pre-contemplation (no intention to serve more fruit and vegetable), contemplation (have intention to serve more fruit and vegetable in the next six months), or preparation (have intention to serve more fruit and vegetable in the next thirty days). Subjects that serve five or more (≥ 5) servings per day were classified into action (have been serving for less than six months) or maintenance (have been serving for more than six months).

3.6.2 Parental Feeding Style

Parents' feeding style was assessed with the Parental Feeding Style Questionnaire (PFSQ). There were a total of 27 items in this questionnaire that were divided into four dimensions; 'Control over eating' (10 items), 'Encouragement to eat' (8 items), 'Emotional feeding' (5 items) and 'Instrumental feeding' (4 items). Subjects were required to choose a number from a 5-point Likert scale (1-never, 2-rarely, 3-sometimes, 4-often, 5-always). As for the scoring, the average for each dimension was calculated and the highest score indicated that the parents had a tendency towards that specific feeding style. This questionnaire consisted of both Malay and English translations.

3.6.3 Food security

Food security was assessed by using the standard 'short form' Six Item Food Security Scales. The questionnaire consisted of both Malay and English translations. There were six items in this questionnaire and for item number 1-2, the scale used were 1-often true, 2-sometimes true, 3-not true and 4-DK or refused. As for item number 3-5 (not included 3a), the subjects were required to answer either yes, no or DK. For question 3a, only subjects who responded "yes" for question 3 were needed to answer. Otherwise, they were not associated with the question. For the scoring, responses of "often" , "sometimes", "almost every month" and "some months but not every months" were considered affirmative. The total number of affirmative responses was the score.

Score	Indication
0-1	High or marginal food security
2-4	Low food security
5-6	Very low food security

Table 3. 3 Scoring of six item food security scale

3.6.4 Fruit and vegetable intake among children

The intake of fruit and vegetable among children was assessed by 24-hour diet recall. The subjects need to record their children's food intake on two non-consecutive days which are weekday and weekend. The subjects had to record the food intake as detailed as possible (food type, portion, cooking method, brand if any etc.). Then, the average of the two days was calculated. The data for the diet recall were analyzed by Nutritionist Pro Diet Analysis Software.

3.7 Data Collection Procedures

This study was conducted from February to April 2020. Figure 3.2 shows the flow of data collection procedure. Students from SK Sri Serdang aged between 7 to 11 years old were approached. Two classes from each year were chosen. A brief explanation about this study was given by the researcher during the visit to the classes. Next, the students were given a study information, a consent form and questionnaires each to pass to their parents/caregiver in order to participate in the study. During second visit to the schools which was after four days, the consent form and the questionnaires were collected from the students through their respective teachers. Due to the pandemic, data collection had to be stopped.

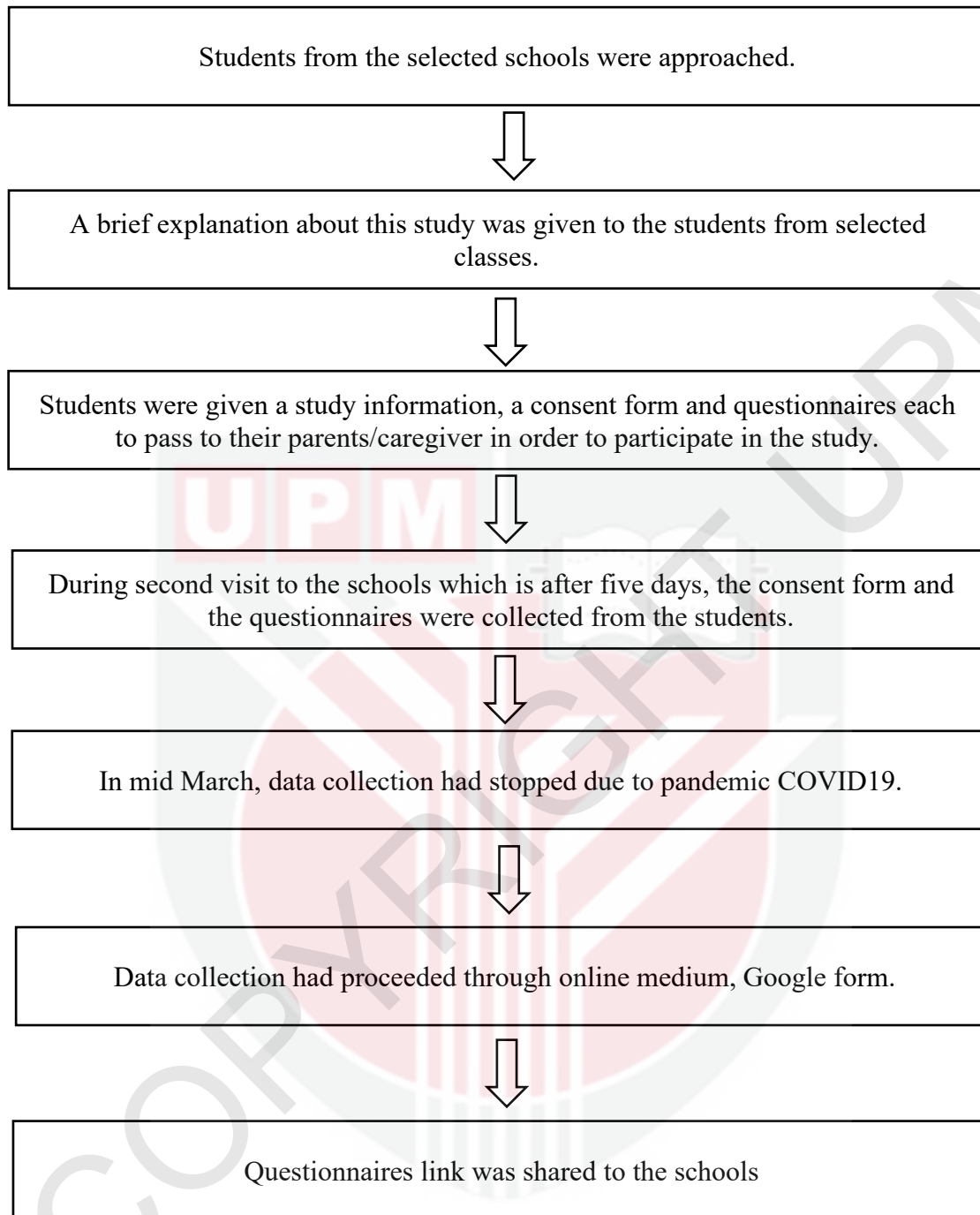


Figure 3. 2 Flow chart of data collection procedure

3.8 Study Approval

Firstly, approval from the Ministry of Education was obtained to conduct this study in SK Sri Serdang. Then, ethical approval was obtained from the Research Ethics Committee, JKEUPM. Permission to conduct this study in SK Sri Serdang was obtained from both senior assistant and principal of SK Sri Serdang.. All students were given sheets of information about the study and a consent form for their parents/caregiver to sign in order to participate in this study.

3.9 Data Analysis

The data was analyzed by using IBM SPSS 22. Categorical data were presented in frequencies and percentage and continuous data were presented in mean and standard deviation. For association between stages of change and food security with fruit and vegetable intake, Chi-square test was used. For association of feeding style and fruit and vegetable intake, Pearson-correlation was used. The significance level was set at $p < 0.05$.

3.10 Risk and Benefits

There were no risk in participating in this study as this study did not include invasive method. The subjects were only required to fill the consent form and answer a few questionnaires. There might be a few benefits gained from this study. After recording the food intake of their children, subjects would be more aware of the food that their children eat.

3.11 Gantt Chart

Year		2019				2020							
Activities		Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
1	Proposal writing	■	■										
2	Literature review	■	■	■	■	■							
3	Ethical approval				■	■	■						
4	Questionnaire preparation				■	■	■	■					
5	Data collection						■	■	■	■	■		
6	Data analysis								■	■	■	■	■
7	Final thesis write-up										■	■	■

CHAPTER 4

RESULTS

4.1 Sociodemographic background of subjects

Data collection was carried out in February until April 2020. A total of 100 students were approached from SK Sri Serdang but only 36 students completed the study. The remaining students were either not completed the questionnaires or did not submit the questionnaires to the researcher. During the pandemic COVID-19, another 4 students completed the study by completing the questionnaires through online medium, Google form, making the total of subjects to 40. However, this study did not achieve minimum sample size due to Movement Control Order during pandemic.

Table 4.1 shows the sociodemographic background of subjects. Most of the subjects in this study were female (72.5%) and in the age range of 31 to 40 years old (67.5%). More than half of the subjects were Malay (80.0%), followed by others; Kadazandusun (17.5%) and one Indian (2.5%).

From the Table 4.1, 95% were married and 5% were single parents. Majority of the subjects were employed (80.0%) and minority were unemployed (20.0%). As for educational level, a total of 61.5% finished tertiary education, 36.0% finished secondary education and only 2.5% finished primary education.

Table 4. 1 Sociodemographic background of subjects

Characteristics	<i>n</i> (%)	Mean±SD
Age		2.12±0.56
20-30	4 (10.0)	
31-40	27 (67.5)	
41-50	9 (22.5)	
Sex		
Male	11 (27.5)	
Female	29 (72.5)	
Ethnicity		
Malay	32 (80.0)	
Indian	1 (2.5)	
Others	7 (17.5)	
Marital Status		
Single	2 (5.0)	
Married	38 (95.0)	
Occupation		
Working	32 (80.0)	
Not working	8 (20.0)	
Education Level		
Primary	1 (2.5)	
Secondary	14 (36.0)	
Tertiary	24 (61.5)	

4.2 Stages of change in increasing fruit and vegetable of subjects

Table 4.2 shows the stages of change in increasing fruit and vegetable among subjects. According to the table, majority of the subjects were categorized into the first three stages; pre-contemplation (22.5%), contemplation (50.0%) and preparation (25.0%). Those were the subjects that reported serving their families with less than five servings of fruit and vegetable.

In addition, subjects in the pre-contemplation stage chose not to serve their families with enough fruit and vegetable due to lack of readiness. Those who were in the contemplation stage chose to prepare fruit and vegetable in the upcoming six months while those in preparation stage are ready to serve fruit and vegetable to their family and had taken small steps in behavioral change. Only one subject were in maintenance stage (2.5%), indicated that the subject had been serving enough fruit and vegetable to the family.

Table 4. 2 Stages of change in increasing fruit and vegetable of subjects

Characteristics	<i>n</i> (%)	Mean±SD
Stages of change		2.15±0.83
Pre-contemplation	9 (22.5)	
Contemplation	20 (50.0)	
Preparation	10 (25.0)	
Action	0 (0.0)	
Maintenance	1 (2.5)	

4.3 Feeding style of subjects

Table 4.3 shows the feeding style among the subjects in this study. From the table, encouragement feeding style was the most used in this study, where 24 out of 40 subjects (60.0%) showed a tendency towards the style, while 32.5% were into control style, 5.0% were into instrumental feeding style and lastly emotional feeding style (2.5%) was the least used feeding style in this study. In this study, we could see most parents preferred encouragement feeding style by encouraging their children in terms of dietary intake. The least preferred feeding style was emotional feeding where the style was initiated by the emotion of the children.

Table 4. 3 Feeding style of subjects

Characteristics	<i>n</i> (%)	Mean±SD
Feeding style		3.20±0.72
Instrumental feeding	2 (5.0)	
Emotional feeding	1 (2.5)	
Encouragement to eat	24 (60.0)	
Control over eating	13 (32.5)	

4.4 Food security status of subjects

According to Table 4.4 that shows the food security status among subjects, half of the subjects reported to be in either high or marginal food security (50.0%) in the last 12 months. Another half of the subjects were shown to have low food secure in the last 12 months (50.0%). Subjects in the low food secure status were reported to cut down their meal size and skip meals for the last 12 months because there were not enough food for the household.

Table 4. 4 Food security status of subjects

Characteristics	<i>n</i> (%)	Mean±SD
Food security		1.50±0.51
High/marginal	20 (50.0)	
Low	20 (50.0)	

4.5 Fruits and vegetables intake of subjects' children

For fruit and vegetable intake, children in this study did not receive adequate amount of recommended fruit and vegetable intake. These children consumed less than five servings of fruit and vegetable. Table 4.5 shows the fruit and vegetable intake of the subject's child. One-third of the children consumed < 2 servings of fruit and vegetable (40.0%) and another two-third consumed ≥ 2 servings of fruit and vegetable (60.0%).

Table 4. 5 Fruit and vegetable intake of children

Characteristics	<i>n</i> (%)	Mean±SD
Fruits and vegetables intake		1.60±0.50
< 2 servings	16 (40.0)	
≥ 2 servings	24 (60.0)	

4.6 Hypothesis testing

For statistical analysis, chi-square test was conducted to determine the association between stages of change in increasing fruit and vegetable and food security with the fruit and vegetable intake. For stages of change, the subjects were categorized into action (preparation and maintenance) and non-action (pre-contemplation and contemplation). Food security was categorized into two categories; high/marginal and low food secure.

Table 4.6 shows the chi-square test result between the two variables (stages of change and food security) and fruit and vegetable intake. Based on the analyzed data in the table, there was a significant association between stages of change and fruit and vegetable intake ($\chi^2= 7.163, p= .012$). Subjects in the non-action stages reported consumed less < 2 servings of fruit and vegetable.

Based on the table, there was a significant association between food security and fruit and vegetable intake ($\chi^2= 6.667, p= .022$). High/marginal food secure subjects consumed more fruit and vegetable compare to low food secure subjects.

Table 4. 6 Chi-square test result between variables and fruit and vegetable intake

Characteristics	< 2 servings (n=16) n(%)	≥ 2 servings (n=24) n(%)	χ^2 value	p-value
Stages of change			7.163	^a 0.012*
Action	1 (6.25)	11 (45.8)		
Non-action	15 (93.75)	13 (54.2)		
Food security			6.667	0.022*
High/marginal	4 (25.0)	16 (66.7)		
Low	12 (75.0)	8 (33.3)		

*Association is significant at <0.05

^aFisher's exact test

The correlation of feeding style with fruit and vegetable intake was determined using Pearson's correlation test. Based on the analyzed data in Table 4.7, all the feeding styles were not statistically significant with fruit and vegetable intake. There was a weak and positive correlation between instrumental feeding with fruit and vegetable intake ($r= 0.216$, $p= 0.181$). Emotional feeding was positively correlated with fruit and vegetable intake, however the correlation was weak ($r= 0.181$, $p= 0.264$). Encouragement to eat was found to have weak and positive correlation with fruit and vegetable ($r= 0.253$, $p= 0.116$). Last but not least, with an r value of -0.03 and p -value of 0.986 , control over eating was weak and positively correlated with fruit and vegetable intake.

Table 4. 7 Pearson correlation result between feeding style and fruit and vegetable intake

Variable	Fruit and vegetable intake	
	<i>r</i>	<i>p-value</i>
Feeding style		
Instrumental feeding	0.216	0.181
Emotional feeding	0.181	0.264
Encouragement to eat	0.253	0.116
Control over eating	-0.03	0.986

4.7 Questionnaires result

4.7.1 Stages of change in increasing fruit and vegetable

Table 4. 8 Stages of change questionnaire result

Item	<i>n (%)</i>
How many servings of fruit and vegetable served for the family	
Zero (0)	1 (2.5)
One (1)	11 (27.5)
Two (2)	12 (30.0)
Three (3)	10 (25.0)
Four (4)	5 (12.5)
Five (5)	1 (2.5)
Do you plan to start regularly serving your family five or more servings a day	
No	8 (20.0)
Yes, next 6 months	20 (50.0)
Yes, next 30 days	11 (27.5)
How long have you been serving your	

family 5 or more servings a day

Six months and more

1 (2.5)

4.7.2 Feeding style

Table 4. 9 Feeding style questionnaire result

Item	n (%)				
	Never	Rarely	Sometimes	Often	Always
I allow my child to choose which foods to have for meals	4 (10.0)	4 (10.0)	16 (40.0)	11 (27.5)	5 (12.5)
I give my child something to eat to make him/her feel better when s/he is feeling upset	5 (12.5)	8 (20.0)	15 (37.5)	10 (25.0)	2 (5.0)
I encourage my child to look forward to the meal	3 (7.5)	7 (17.5)	14 (35.0)	12 (30.0)	4 (10.0)
I praise my child if s/he eats what I give him/her	0 (0.0)	1 (2.5)	8 (20.0)	15 (37.5)	16 (40.0)
I decide how many snacks my child should have	5 (12.5)	0 (0.0)	5 (12.5)	14 (35.0)	16 (40.0)
I encourage my child to eat a wide variety of foods	3 (7.5)	2 (5.0)	7 (17.5)	16 (40.0)	12 (30.0)
In order to get my child to behave him/herself I promise him/her something to eat	2 (5.0)	13 (32.5)	14 (35.0)	8 (20.0)	3 (7.5)
I present food in an attractive way to my child	1 (2.5)	9 (22.5)	20 (50.0)	8 (20.0)	2 (5.0)
If my child misbehaves I withhold his/her favourite food	15 (37.5)	5 (12.5)	13 (32.5)	7 (17.5)	0 (0.0)
I encourage my child to taste each of the foods I serve at mealtimes	0 (0.0)	1 (2.5)	5 (12.5)	20 (50.0)	14 (35.0)

I allow my child to wander around during a meal	24 (60.0)	11 (27.5)	3 (7.5)	2 (5.0)	0 (0.0)
I encourage my child to try foods that s/he hasn't tasted before	1 (2.5)	4 (10.0)	11 (27.5)	16 (40.0)	8 (20.0)
I give my child something to eat to make him/her feel better when s/he has been hurt	6 (15.0)	11 (27.5)	14 (35.0)	7 (17.5)	2 (5.0)
I let my child decide when s/he would like to have her meal	6 (15.0)	13 (32.5)	15 (37.5)	4 (10.0)	2 (5.0)
I give my child something to eat if s/he is feeling bored	6 (15.0)	12 (30.0)	16 (40.0)	5 (12.5)	1 (2.5)
I allow my child to decide when s/he has had enough snacks to eat	12 (30.0)	14 (35.0)	11 (27.5)	2 (5.0)	1 (2.5)
I decide when it is time for my child to have a snack	4 (10.0)	6 (15.0)	9 (22.5)	12 (30.0)	9 (22.5)
I use puddings as a bribe to get my child to eat his/her main course	21 (52.5)	12 (30.0)	3 (7.5)	3 (7.5)	1 (2.5)
I encourage my child to enjoy his/her food	0 (0.0)	1 (2.5)	7 (17.5)	19 (47.5)	13 (32.5)
I decide the times when my child eats his/her meals	3 (7.5)	3 (7.5)	13 (32.5)	13 (32.5)	8 (20.0)
I give my child something to eat to make him/her feel better when s/he is worried	11 (27.5)	12 (30.0)	11 (27.5)	5 (12.5)	1 (2.5)
I reward my child with something to eat when s/he is well behaved	2 (5.0)	12 (30.0)	8 (20.0)	14 (35.0)	4 (10.0)
I let my child eat between	1 (2.5)	9 (22.5)	21 (52.5)	8 (20.0)	1 (2.5)

meals whenever s/he wants

I insist my child eats meals at the table	1 (2.5)	4 (10.0)	12 (30.0)	11 (27.5)	12 (30.0)
I give my child something to eat to make him/her feel better when s/he is feeling angry	12 (30.0)	15 (37.5)	11 (27.5)	2 (5.0)	0 (0.0)
I decide what my child eats between meals	3 (7.5)	14 (35.0)	12 (30.0)	8 (20.0)	3 (7.5)
I praise my child if s/he eats a new food	0 (0.0)	4 (10.0)	11 (27.5)	11 (27.5)	14 (35.0)

4.7.3 Food security

Table 4. 10 Food security questionnaire result

Item	n (%)		
	Often true	Sometimes true	Not true
The food that we bought just didn't last, and we didn't have money to get more	4 (10.0)	11 (27.5)	25 (62.5)
We couldn't afford to eat balanced meals	5 (12.5)	11 (27.5)	24 (60.0)
Did you/adults in your household ever cut the size of your meals/skip meals because there wasn't enough money for food	Yes	No	DK
	10 (25.0)	28 (70.0)	2 (5.0)
(If yes), how often did this happen	N/A	Almost every month	Some months but not every months
	30 (75.0)	7 (17.5)	3 (7.5)
Did you ever eat less than you felt you should because there wasn't enough money for food (in the last 12 months)	Yes	No	DK
	16 (40.0)	22 (55.0)	2 (5.0)

Were you feeling hungry but didn't eat because there wasn't enough money for food (in the last 12 months)	11 (27.5)	27 (67.5)	2 (5.0)
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CHAPTER 5

DISCUSSION

5.1 Stages of change in increasing fruit and vegetable

In this study, there were more subjects were at the pre-contemplation, contemplation and preparation stages compare to action and maintenance stages. This study was in line with previous study conducted where 96% of the participants were at the first three stages and only 4% were in action and maintenance stages (Reis et al., 2014).

5.2 Feeding style

Subjects in this study had more tendency towards practising encouragement and control feeding style whereas instrumental and emotional feeding style were the least used. This is similar to previous study where parents as the subjects tend to practise encouragement and control feeding style the most compare to instrumental and emotional feeding (Inhulsen et al., 2017).

5.3 Food security

Both high/marginal food security and low food security had similar distribution of subjects. This study was almost similar to a previous study where 40% of the participants were food insecure and 60% of them were food secure (Mook et al., 2016).

5.4 Fruit and vegetable intake

Subjects in this study did not achieve recommended intake of fruit and vegetable. It was stated that less than one fifth of Malaysian children did not achieve recommended intake of fruit and vegetable (Chong et al, 2017).

5.5 Hypothesis testing

H₀1: There is no significant association between stages of change and fruit and vegetable intake.

According to Table 4.6, there is a significant association between stages of change and fruit and vegetable intake. This study is similar to a previous study in determining intervention strategies to increase fruit and vegetable based on stages of change, where there is significant association ($p < 0.001$) between stages of change and fruit and vegetable intake in children (Hildebrand & Betts, 2009). Subjects whose in pre-contemplation and contemplation stages were reported to have lower fruit and vegetable intake while subjects in action and maintenance stages reported higher intake of fruit and vegetable. According to the study, subjects at pre-contemplation

and contemplation stages had lower self-efficacy compare to those in preparation, action and maintenance hence, the intake of fruit and vegetable is lower.

Thus, the null hypothesis was rejected due to its significant association between stages of change and fruit and vegetable intake.

H₀2: There is no significant association between feeding style and fruit and vegetable intake.

Based on Table 4.7, there were no significant association between feeding style (instrumental feeding, emotional feeding, encouragement to eat and control over eating) with fruit and vegetable intake. Findings in this study were in contrast with previous study in determining the consumption of fruit and vegetable among children in Hong Kong where control over eating was associated with higher intake of fruit and vegetable while emotional feeding was associated with lower intake of fruit and vegetable (Lo et al., 2015). According to a study conducted by Inhulsen et al. (2017), encouragement feeding was likely to have higher fruit and vegetable intake compare to other feeding styles. Encouragement feeding style tends to promote a healthy dietary intake among children. The difference in findings might be due to sample size being too small, thus significant results were difficult to observe. There might be other possibilities and factors that influence the fruit and vegetable intake among children such as food provision, peer pressure and fruit and vegetable availability in school compound.

Thus, the null hypothesis was failed to reject due to no significant association between feeding style and fruit and vegetable intake.

H₀3: There is no significant association between food security and fruit and vegetable intake.

Based on Table 4.6, there was a significant association between food security and fruit and vegetable intake. This study's findings were similar to previous study where the food security had a significant association with fruit and vegetable intake (Fricke et al., 2015). High food secure participants had higher fruit and vegetable intake compare to low food secure participants (Nunnery et al., 2018). It was highlighted that the lower the food security, the lower the availability of getting fruit and vegetable, hence the intake was lower. High/marginal food security led to high accessibility and availability towards nutritious foods including fruit and vegetable (Gundersen, 2015). When an individual had low food security status, it was difficult to gain access towards fruit and vegetable and it might be due to low income.

Thus, the null hypothesis was rejected due to its significant association between food security and fruit and vegetable intake.

CHAPTER 6

CONCLUSION

6.1 Conclusion

Findings of this study revealed that there were association between stages of change in increasing fruits and vegetables and food security with fruits and vegetables intake. Assessing an individual's stages of change shows an important role so that intervention strategies can be created at every stages to increase fruit and vegetable intake among children.

Food security is one of the important roles in determining the fruit and vegetable intake. High/marginal food secure was associated with higher intake of fruit and vegetable and low food secure was associated with lower intake of fruit and vegetable. This is due to high and easy access to fruit and vegetable in high/marginal food secure individuals, thus it is easier to gain access to fruit and vegetable.

There was no significant association between feeding style and fruit and vegetable intake. A small sample size could affect the study significance.

6.2 Limitations and recommendations

There were a few limitations in this study. The sample size used in this study was too small. Due to the pandemic COVID19, this study could not reach its determined sample size because data collection had to be stopped and only a few people answered

the questionnaires through an online medium, Google form. A small sample size could reduce the power of this study and significant results were hard to obtain. Hence, by obtaining larger sample size, this study could be improved in this aspect.

Another limitation was the self-reported 24 hour diet recall questionnaire. Skills are needed to carry out diet recall. For example, skills to determine the portion and serving size of food. There might be over reported or under reported data because the subjects in this study were not taught to record diet recall. Furthermore, data might differ from the real food intake due to poor memory recall. Therefore, a face-to-face diet recall should be conducted to improve this matter.

Further study on the relationship between food provision and fruit and vegetable intake should be considered as it could influence the intake besides parents' feeding styles. In addition, study regarding stages of change and fruit and vegetable intake should also be considered as they were not many studies conducted on stages of change.

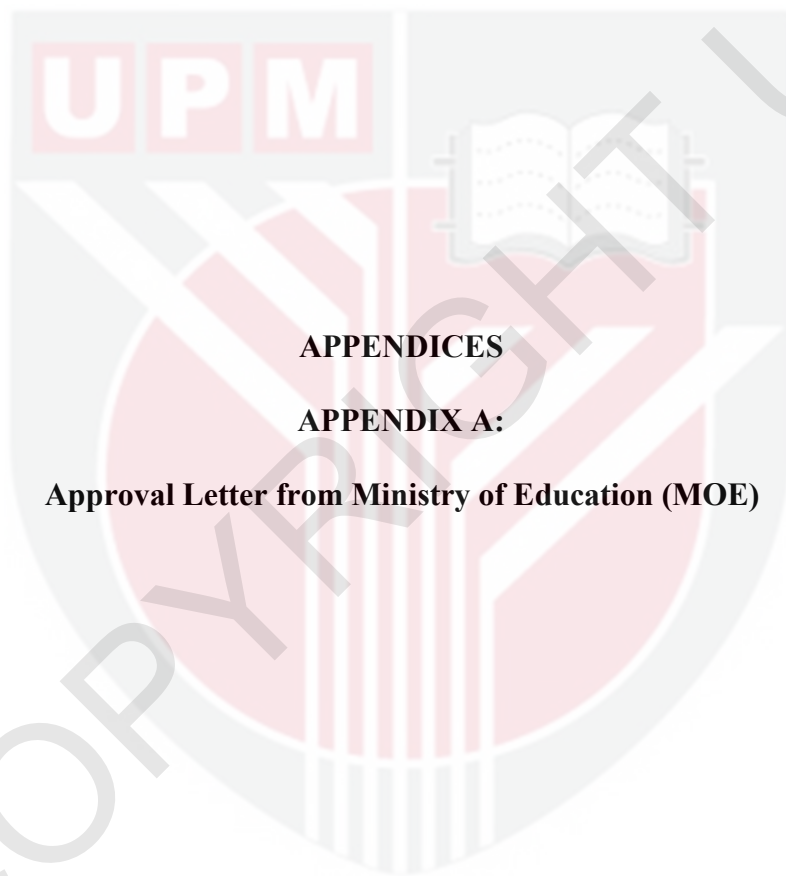
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APPENDICES

APPENDIX A:

Approval Letter from Ministry of Education (MOE)



Ruj. Kami : KPM.600-3/2/3-eras(6803)
Tarikh : 26 Februari 2020

NUR SHAMEERA BINTI MOHD SHARIL
NO. KP : 980925025602

A-4-1 PERUMAHAN POLIS BALAI POLIS BATU FERINGGI
PULAU PINANG 11100 BATU FERRINGHI
PULAU PINANG

Tuan,

KELULUSAN BERSYARAT UNTUK MENJALANKAN KAJIAN :
ASSOCIATION OF PARENT'S STAGES OF CHANGE, FEEDING STYLE AND FOOD SECURITY ON THE CONSUMPTION OF
FRUITS AND VEGETABLES AMONG CHILDREN IN SERDANG, SELANGOR

Perkara di atas adalah dirujuk.

2. Sukacita dimaklumkan bahawa permohonan tuan untuk menjalankan kajian seperti di bawah telah diluluskan dengan syarat :

" PENYELIDIK MESTI MENDAPATKAN KEBENARAN BERTULIS DARIPADA IBU BAPA /PENJAGA MURID YANG DILIBATKAN DALAM KAJIAN INI. PENGUTIPAN DATA TIDAK BOLEH MENGGANGGU AKTIVITI PENGAJARAN DAN PEMBELAJARAN MURID. PENGUTIPAN DATA MELIBATKAN KETINGGIAN DAN BERAT MURID DI SEKOLAH TIDAK DIBENARKAN. "

3. Kelulusan adalah berdasarkan kepada kertas cadangan penyelidikan dan instrumen kajian yang dikemukakan oleh tuan kepada bahagian ini. Walau bagaimanapun kelulusan ini bergantung kepada kebenaran Jabatan Pendidikan Negeri dan Pengetua / Guru Besar yang berkenaan.

4. Surat kelulusan ini sah digunakan bermula dari **27 Februari 2020** hingga **20 Mei 2020**

5. Tuan dikehendaki menyerahkan senaskhah laporan akhir kajian dalam bentuk *hardcopy* bersama salinan *softcopy* berformat pdf dalam CD kepada Bahagian ini. Tuan juga diingatkan supaya mendapat kebenaran terlebih dahulu daripada Bahagian ini sekiranya sebahagian atau sepenuhnya dapatan kajian tersebut hendak diterbitkan di mana-mana forum, seminar atau diumumkan kepada media massa.

Sekian untuk makluman dan tindakan tuan selanjutnya. Terima kasih.

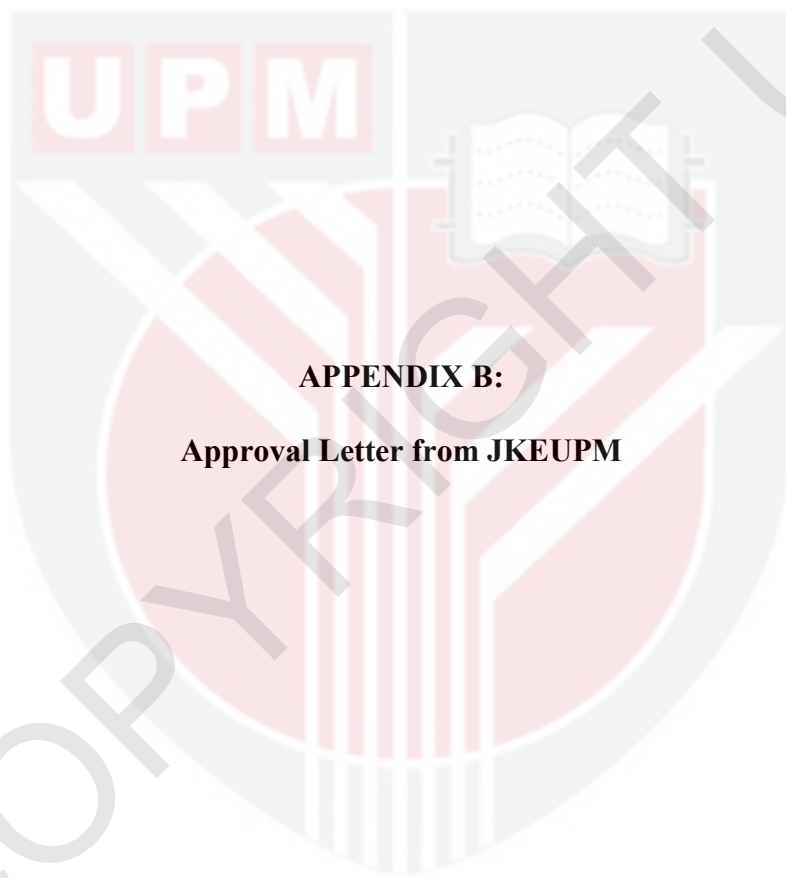
"BERKHIDMAT UNTUK NEGARA"

Saya yang menjalankan amanah,

Ketua Penolong Pengarah Kanan
Sektor Penyelidikan dan Penilaian Dasar
b.p. Pengarah
Bahagian Perancangan dan Penyelidikan Dasar Pendidikan
Kementerian Pendidikan Malaysia

salinan kepada:-

JABATAN PENDIDIKAN SELANGOR



APPENDIX B:

Approval Letter from JKEUPM

Ref. No: UPM/TNCPI/RMC/JKEUPM/1.4.18.2 (JKEUPM)

Date: 9 April 2020

Dear Prof./Dr./Mr./Ms.,

APPLICATION FOR JKEUPM ETHICAL CLEARANCE: APPROVED

With reference to the above, I am pleased to inform you that your application for ethical clearance for the research project entitled '**Association between parent's stage of change, feeding style and food security with fruits and vegetables intake among school children in Serdang, Selangor**', has been approved.

Please note that the official letter of approval will be issued as soon as possible. However, the ethical clearance is considered effective from the date of this email, and you may now proceed with your research.

Kindly remind the ethical approval is required in the case of amendments/ changes to the study documents/ study sites/ study team.

Researchers should also complete a Study Final Report upon study completion. The form can be obtained from the Ethics Committee for Research Involving Human Subjects (JKEUPM) website (<http://www.tncpi.upm.edu.my/faildokumen>).

If you have any enquiries, please contact Ms. Nurulhasanah Ishak (03-97691605) or Ms. Nor Ellia Abd Ajis (03-97691244).

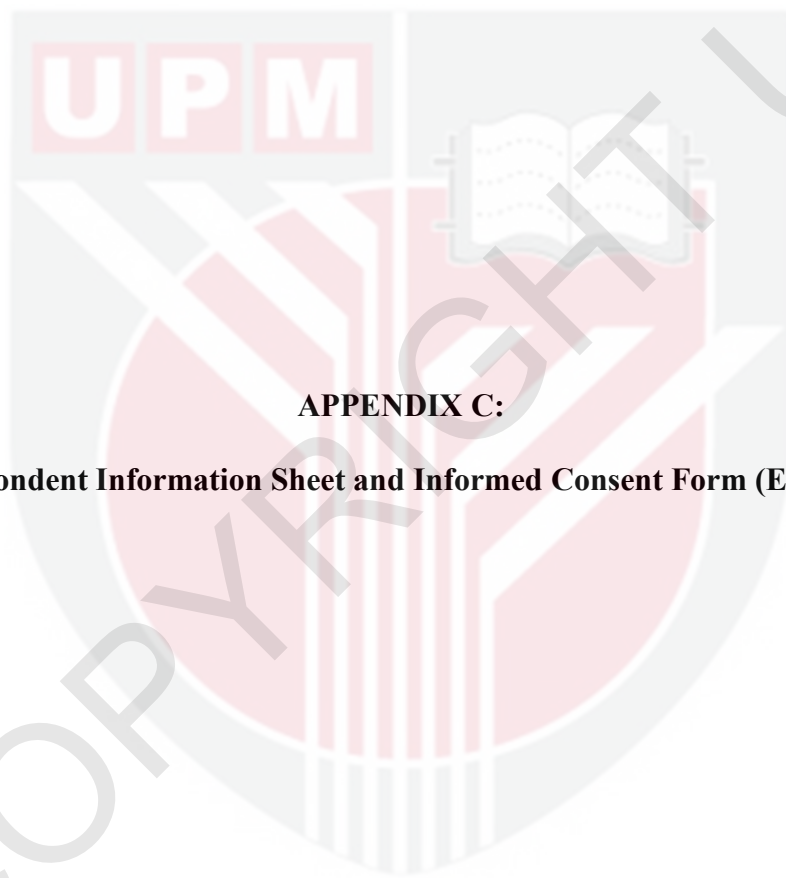
Note: Please use this reference number for any transaction.

- JKEUPM-2020-032

Thank you.

Yours faithfully,

Prof. Dr. Zamberi Sekawi
Chair
Ethics Committee for Research Involving Human Subjects
Universiti Putra Malaysia



APPENDIX C:

Respondent Information Sheet and Informed Consent Form (English)



FORM 2.4: RESPONDENT'S INFORMATION SHEET AND INFORMED CONSENT FORM

Please read the following information carefully and do not hesitate to discuss any questions you may have with the researcher.

1. STUDY TITLE :

Association between parent's stage of change, feeding style and food security with fruits and vegetables intake among school children in Serdang, Selangor.

2. INTRODUCTION:

Fruits and vegetables are an essential component of a healthy diet. Consuming fruits and vegetables are beneficial for health because they provide several nutrients, vitamins and minerals. Fruits and vegetables contain vitamins such as vitamin C and vitamin A, minerals particularly electrolytes, phytochemical as well as dietary fiber (Slavin & Lloyd Beate, 2012). Study showed that fruits and vegetables may reduce the risk of chronic diseases such as cardiovascular disease, diabetes, hypertension, obesity as well as certain type of cancers (Hildebrand & Betts, 2009). As a part of healthy eating, World Health Organization (WHO) recommends fruits and vegetables intake should be increased to at least five serving per day.

Parents play a vital role in shaping children's dietary intake as well as their eating behavior. Children are influenced by their parents because in their early years, parents are the one who hold the decision power in what their children eating. Parents are the one who shape children's like and dislike of certain foods such as fruits and vegetables. One of the factors that may influence the fruits and vegetables intake among children is the parents' stages of change or professionally known as The Transtheoretical Model. This model includes five stages that are important in order to make changes in life. The five stages of this model are precontemplation, contemplation, preparation, action, maintenance and termination or relapse. A series of intermediate/outcome measures are also include in this model. Moving from one stage to another, TTM suggests a set of multivariate outcome space which include decisional balance (pros and cons), self-efficacy and the target behaviour (Velicer, Fava, Prochaska, Norman, & Reading, 2005). Other factors that may influence children's fruits and vegetables consumption are feeding style and food security.

In this study, parent/caregiver of children aged 7 to 11 years old in selected national primary school will be recruited. SK Sri Serdang, SK Serdang, SK Taman Universiti and SK Taman Sungai Besi Indah will be selected as the study location. Only one class from each Year (Year 1- Year 5) is chosen and the parent/caregiver of children who study in the selected classes will be the subject for this study.

The aim of this study is to determine the association between socio-demographic characteristics (e.g age, education level and household income), parent/caregiver's stage of change, decisional balance, self-efficacy, feeding style and food security with fruits and vegetables intake among school children. Parent/caregiver's stage of change, decisional balance, self-efficacy, feeding style and food security may affect children's consumption of fruits and vegetables. Therefore, understanding parent's stage of change, self-efficacy, decisional balance as well as feeding style and food security are important in making change for fruits and vegetables intake among children.

3. WHAT WILL YOU HAVE TO DO?

If you agree to join this study, you are required to answer the questionnaire with 7 sections. You are also

asked to record your child's daily intake for two non-consecutive days (weekday and weekend).

The 7 sections of questionnaire include:

- a) Section A: Socio-demographic Background
- b) Section B: Parent's Stage of Change
- c) Section C: Decisional Balance
- d) Section D: Self-Efficacy
- e) Section E: Food Security
- f) Section F: Feeding Style
- g) Section G: 24-hour Diet Recall

Before you decide to participate in this study, it is important that you understand why the research is being done and what it will involve.

Your participation is entirely voluntary. You are free to withdraw at any time and without giving any reasons for your decision.

Subject will not be paid for participation in this study. However, a token of appreciation will be given to respondent's child if the questionnaires are completed and given back to the researcher.

4. WHO SHOULD NOT PARTICIPATE IN THE STUDY?

Subjects who are not the parent/caregiver of children aged 7 to 11 years old, unable to read and understand Malay and English as well as not willing to participate in this study will be excluded from joining this study.

5. WHAT WILL BE THE BENEFITS OF THE STUDY:

(a) TO YOU AS THE SUBJECT?

The benefit of this study to the subjects is parent/caregiver may understand the factors that affect their children's fruits and vegetables intake. They may also understand that their behaviour can influence their children dietary intake and this may be helpful for them to make change in increasing the serving of fruits and vegetables in their children daily intake

(b) TO THE INVESTIGATOR?

The information gather in this study can be used to plan intervention strategies which aim at increasing consumption of fruits and vegetables among children with the used of behaviour change of parents. This study may provide a clear understanding on the relationship between parent's stage of change, decisional balance, self-efficacy, feeding style and food security with fruits and vegetables intake among children in Malaysia. It also serve as baseline study for future research, fill the research gap and provide more knowledge to the investigator.

6. WHAT ARE THE POSSIBLE RISKS?

There are no possible risks if you join this study since the data collection process does not involve any risky activities. You are only required to provide information by answering the questionnaires given by the investigator.

7. WILL THE INFORMATION THAT YOU PROVIDE AND YOUR IDENTITY REMAIN CONFIDENTIAL?

All the information and results collected will only be used in this study. Data or identity of the subjects will be remained confidential. Relevant information will be given only to certain parties whose involve in this

study. JKEUPM Ethics Review Panel, and regulatory authorities will be granted direct access to participant's medical records for purposes. By signing this consent form, you agree to give your information or data to the investigator.

8. WHO SHOULD YOU CONTACT IF YOU HAVE ADDITIONAL QUESTIONS DURING THE COURSE OF THE RESEARCH?

If you have any additional questions during the course of the research, you can contact **Fransheyno Pie Paitolno** or **Nur Shameera binti Mohd Sharil** as detailed below:

Contact No.: 014-8502080 / 019-5508265

Address: Kolej 17, Universiti Putra Malaysia, 43400 Serdang, Selangor.

Supervisor: Dr. Nor Baizura Md. Yusop

Contact No.: 03-86092931

Email: norbaizura@upm.edu.my

Please initial here if you have read and understood the contents of this page_____

9. CONSENT

I Identity Card No.
address.....

.....hereby voluntarily agree to take part in the research stated above
*(clinical /drug trial/video recording/ focus group/interview-based/ questionnaire-based).

I have been informed about the nature of the research in terms of methodology, possible adverse effects and complications (as written in the Respondent's Information Sheet). I understand that I have the right to withdraw from this research at any time without giving any reason whatsoever. I also understand that this study is confidential and all information provided with regard to my identity will remain private and confidential.

I* wish / do not wish to know the results related to my participation in the research

I agree/do not agree that the images/photos/video recordings/voice recordings related to me be used in any form of publication or presentation (if applicable)

* delete where necessary

Signature Signature
(Witness) (Respondent)

Date : Name :

No. : I/C

I confirm that I have explained to the respondent the nature and purpose of the above-mentioned research.

Date Signature
(Researcher)



APPENDIX D:

Participant Information Sheet and Consent Form (Malay)



BORANG 2.4: PENERANGAN DAN PERSETUJUAN RESPONDEN

Sila baca maklumat berikut dengan teliti. Sekiranya anda mempunyai sebarang pertanyaan, sila kemukakan kepada penyelidik.

1. TAJUK KAJIAN

Hubungan antara peringkat perubahan ibu bapa, gaya pemakanan dan keselamatan makanan dengan pengambilan buah-buahan dan sayur-sayuran dalam kalangan kanak-kanak sekolah di Serdang, Selangor.

2. PENGENALAN

Buah-buahan dan sayur-sayuran merupakan komponen penting dalam diet yang sihat. Pengambilan buah-buahan dan sayur-sayuran adalah baik untuk kesihatan kerana buah-buahan dan sayur-sayuran mengandungi beberapa nutrien, vitamin dan mineral. Buah-buahan dan sayur-sayuran mengandungi vitamin seperti vitamin C dan vitamin A, mineral terutamanya elektrolit, phytochemical serta serat (Slavin & Lloyd Beate, 2012). Kajian menunjukkan bahawa buah-buahan dan sayur-sayuran boleh mengurangkan risiko penyakit kronik seperti penyakit kardiovaskular, diabetes, hipertensi, obesiti serta beberapa jenis kanser yang tertentu (Hildebrand & Betts, 2009). Sebagai sebahagian daripada pemakanan sihat, Pertubuhan Kesihatan Sedunia (WHO) mengesyorkan pengambilan buah-buahan dan sayur-sayuran perlu ditingkatkan kepada sekurang-kurangnya lima hidangan setiap hari.

Ibu bapa memainkan peranan penting dalam membentuk pemakanan kanak-kanak serta tingkah laku pemakanan mereka. Kanak-kanak dipengaruhi oleh ibu bapa kerana pada awal umur mereka, ibu bapa ialah orang yang berkuasa dalam membuat keputusan untuk menentukan makanan yang akan dimakan oleh anak mereka. Ibu bapa merupakan orang yang membentuk kegemaran dan bukan kegemaran kanak-kanak terhadap makanan tertentu seperti buah-buahan dan sayur-sayuran. Salah satu faktor yang boleh mempengaruhi pengambilan buah-buahan dan sayur-sayuran dalam kalangan kanak-kanak adalah peringkat perubahan ibu bapa atau dikenali sebagai "Model Transtheoretical". Dalam kajian ini, ibu bapa/penjaga kanak-kanak yang berumur 7 hingga 11 tahun di sekolah rendah kebangsaan terpilih akan direkrut. SK Sri Serdang, SK Serdang, SK Taman Universiti dan SK Taman Sungai Besi Indah akan dipilih sebagai lokasi kajian. Hanya satu kelas dari setiap Tahun (Tahun 1 Tahun 5) akan dipilih dan ibu bapa/penjaga kanak-kanak yang belajar di kelas terpilih tersebut akan menjadi subjek bagi kajian ini.

Tujuan kajian ini adalah untuk mengenal pasti hubungan antara ciri-ciri sosio-demografi (contohnya umur, tahap pendidikan dan pendapatan isi rumah), peringkat perubahan ibu bapa/penjaga, keseimbangan, keyakinan diri, gaya pemakanan dan keselamatan makanan dengan pengambilan buah-buahan dan sayur-sayuran dalam kalangan kanak-kanak sekolah. Tahap perubahan ibu bapa/pengasuh, keseimbangan, keyakinan diri, gaya pemakanan dan keselamatan makanan dapat mempengaruhi pengambilan buah-buahan dan sayur-sayuran kanak-kanak. Oleh itu, memahami peringkat perubahan ibu bapa, keyakinan diri, keseimbangan dan gaya pemakanan serta keselamatan makanan adalah penting dalam membuat perubahan untuk meningkatkan pengambilan buah-buahan dan sayur-sayuran dalam kalangan kanak-kanak.

3. APAKAH YANG PERLU ANDA LAKUKAN?

Jika anda bersetuju untuk menyertai kajian ini, anda dikehendaki menjawab borang soal selidik yang mengandungi 7 bahagian. Anda juga diminta untuk mencatat pengambilan makanan harian anak anda selama dua hari berturut-turut (hari kerja dan hujung minggu). 7 bahagian soal selidik itu termasuk:

- a) Bahagian A: Latar Belakang Sosio-demografi
- b) Bahagian B: Peringkat Perubahan Ibu Bapa
- c) Bahagian C: Keseimbangan
- d) Bahagian D: Keyakinan Diri
- e) Bahagian E: Keselamatan Makanan
- f) Bahagian F: Gaya Pemakanan
- g) Bahagian G: Pengambilan Diet 24-jam

Sebelum anda membuat keputusan untuk mengambil bahagian dalam kajian ini, adalah penting untuk anda memahami mengapa penyelidikan ini dilakukan.

Penyertaan anda adalah secara sukarela. Anda bebas untuk menarik diri pada bila-bila masa dan tanpa memberi sebarang sebab untuk keputusan anda.

Subjek tidak akan dibayar untuk penyertaan dalam kajian ini. Walaubagaimanapun, token penghargaan akan diberikan kepada anak responden sekiranya borang soal selidik lengkap diisi dan dikembalikan kepada penyelidik.

4. SIAPA YANG TIDAK BOLEH MENYERTAI KAJIAN INI?

Subjek yang bukan ibu bapa/penjaga kepada kanak-kanak berumur 7 hingga 11 tahun, tidak dapat membaca dan memahami Bahasa Melayu dan Bahasa Inggeris serta tidak bersedia mengambil bahagian dalam kajian ini akan dikecualikan daripada menyertai kajian ini.

5. APAKAH FAEDAH MENYERTAI KAJIAN INI?

a) KEPADA ANDA SEBAGAI PESERTA?

Faedah kajian ini kepada subjek ialah ibu bapa/pengasuh dapat memahami faktor-faktor yang mempengaruhi pengambilan buah-buahan dan sayur-sayuran anak-anak mereka. Mereka juga akan memahami bahawa tingkah laku mereka boleh mempengaruhi pengambilan makanan anak-anak mereka dan ini boleh membantu mereka untuk membuat perubahan dalam meningkatkan pengambilan buah-buahan dan sayur-sayuran dalam pemakanan harian anak-anak mereka.

b) KEPADA PENYELIDIK?

Maklumat yang dikumpulkan dalam kajian ini boleh digunakan untuk merancang strategi intervensi yang bertujuan untuk meningkatkan pengambilan buah-buahan dan sayur-sayuran dalam kalangan kanak-kanak dengan menggunakan tingkah laku perubahan ibu bapa. Kajian ini dapat memberikan pemahaman yang jelas mengenai hubungan antara tahap perubahan ibu bapa, keseimbangan, keyakinan diri, gaya pemakanan dan keselamatan makanan dengan pengambilan buah-buahan dan sayur-sayuran dalam kalangan kanak-kanak di Malaysia. Kajian ini juga berfungsi sebagai kajian asas untuk penyelidikan masa depan, mengisi jurang penyelidikan dan memberi lebih banyak pengetahuan kepada penyelidik.

6. ADAKAH IA BERISIKO?

Tidak ada risiko jika anda menyertai kajian ini kerana proses pengumpulan data tidak melibatkan sebarang aktiviti berisiko. Anda hanya perlu memberikan maklumat dengan menjawab borang soal selidik yang diberikan oleh penyelidik.

7. ADAKAH MAKLUMAT DAN IDENTITI SAYA KEKAL RAHSIA?

Semua maklumat dan keputusan yang dikumpulkan hanya akan digunakan dalam kajian ini. Data atau identiti subjek akan kekal sulit. Maklumat relevan hanya akan diberikan kepada pihak-pihak tertentu yang terlibat dalam kajian ini sahaja. Panel Kajian Etika JKEUPM dan pihak berkuasa pengawalseliaan akan diberikan akses langsung kepada rekod perubatan peserta untuk tujuan tertentu. Dengan menandatangani borang persetujuan ini, anda bersetuju untuk memberikan maklumat atau data kepada penyelidik.

8. SIAPA YANG SAYA PERLU HUBUNGI SEKIRANYA SAYA MEMPUNYAI SOALAN TAMBAHAN SEMASA MENGIKUTI PENYELIDIKAN INI?

Sekiranya anda mempunyai sebarang pertanyaan tambahan semasa menjalankan penyelidikan, anda boleh menghubungi **Fransheyne Pie Paitolno** atau **Nur Shameera binti Mohd Sharil** seperti yang tertera di bawah:

Nombor Telefon.: 014-8502080 / 019-5508265

Alamat: Kolej 17, Universiti Putra Malaysia, 43400 Serdang, Selangor.

Penyelia: Dr. Nor Baizura Md. Yusop

Nombor Telefon: 03-86092931

E-mel: norbaizura@upm.edu.my

Sila tandatangan di sini sekiranya anda telah membaca dan memahami kandungan halaman ini

9. PERSETUJUAN

Saya..... No Kad Pengenalan.
beralamat.....

.....dengan ini bersetuju untuk mengambil bahagian secara sukarela dalam penyelidikan yang tersebut di atas *(kajian klinikal/percubaan ubat-ubatan/rakaman video/kumpulan sasaran/temuduga/ soal selidik).

Saya telah diberi penjelasan secara menyeluruh mengenai penyelidikan ini dari segi metodologi, risiko dan komplikasi (seperti tertulis pada Helaian Penerangan Responden). Saya memahami bahawa saya berhak menarik diri dari penyelidikan ini pada bila-bila masa tanpa memberi sebarang alasan. Saya juga memahami bahawa sebarang maklumat yang berkaitan identiti saya akan dirahsiakan.

Saya* berminat / tidak berminat untuk mengetahui keputusan kajian yang melibatkan saya.

I setuju/tidak bersetuju untuk imei/gambar/rakaman video/ rakaman suara digunakan dalam apa jua bentuk penerbitan atau pembentangan. (sekiranya berkaitan).

*potong yang tidak berkenaan

Tandatangan Tandatangan
(Saksi) (Responden)

Tarikh : Nama :

K/P: No.

Saya mengesahkan bahawa saya telah menerangkan kepada responden ini sifat dan tujuan penyelidikan yang tersebut di atas.

Tarikh

(Penyelidik)

Tandatangan



APPENDIX E:
Questionnaires



FAKULTI PERUBATAN DAN SAINS KESIHATAN

JABATAN PEMAKANAN DAN DIETETIK

BORANG SOAL SELIDIK

Tajuk Kajian:

Hubungan Antara Peringkat Perubahan Ibu Bapa, Gaya Pemakanan dan Keselamatan Makanan Dengan Pengambilan Buah-buahan dan Sayur-sayuran Dalam Kalangan Kanak-Kanak Sekolah di Serdang, Selangor.

Penyelidik:

- a) **Dr. Nor Baizura Md. Yusop**
- b) **Fransheyne Pie Paitolno**
- c) **Nur Shameera binti Mohd Sharil**

BAHAGIAN A: LATAR BELAKANG SOCIO-DEMOGRAFIK

PART A: SOCIO-DEMOGRAPHIC BACKGROUND

Sila isikan tempat kosong atau tandakan (✓) pada kotak yang berkenaan.

Please fill in the blanks or tick (✓) in the box provided.

1.	<p>Umur/ <i>Age</i>:</p> <ul style="list-style-type: none"> • Ibu/ bapa/ penjaga/ : ____ tahun <i>Parent/ caregiver</i> • Anak/ : ____ tahun <i>Child</i> 	5. Pekerjaan/ <i>Occupation</i> :
		<p>Sektor Awam/ <i>Public Sector</i> <input type="checkbox"/></p> <p>Sektor Swasta/ <i>Private Sector</i> <input type="checkbox"/></p> <p>Bekerja sendiri/ <i>Self-employed</i> <input type="checkbox"/></p> <p>Suri-rumah/ <i>Housewives</i> <input type="checkbox"/></p> <p>Menganggur/ <i>Unemployed</i> <input type="checkbox"/></p> <p>Bersara/ <i>Retired</i> <input type="checkbox"/></p>
2.	<p>Jantina/ <i>Sex</i>:</p> <p>Lelaki/ <input type="checkbox"/> Perempu/ <input type="checkbox"/> <i>Male Female</i></p>	6. Bilangan Isi Rumah/ <i>Number of Households</i> : _____
3.	<p>Bangsa/ <i>Ethnicity</i>:</p> <p>Melayu/ <input type="checkbox"/> Cina/ <input type="checkbox"/> <i>Malay Chinese</i></p> <p>India/ <input type="checkbox"/> Lain-lain Nyatakan <i>/Indian Others. Specify:</i></p> <p>_____</p>	7. Pendapatan Isi Rumah Bulanan/ <i>Monthly Household Income</i> : RM _____
4.	<p>Status Perkahwinan/ <i>Marital status</i>:</p> <p>Bujang/ <input type="checkbox"/> <i>Single</i></p> <p>Kahwin/ <input type="checkbox"/> <i>Married</i></p> <p>Cerai/ <input type="checkbox"/> <i>Divorced</i></p>	8. Tahap Pendidikan/ <i>Education Level</i> :
		<p>UPSR <input type="checkbox"/> Diploma/ <input type="checkbox"/> <i>Diploma</i></p> <p>SRP/PMR <input type="checkbox"/> Ijazah Sarjana <input type="checkbox"/> <i>Muda/ Bachelor Degree</i></p> <p>SPM <input type="checkbox"/></p> <p>STPM <input type="checkbox"/> Ijazah Sarjana <input type="checkbox"/> <i>Master</i></p> <p>Sijil/ <input type="checkbox"/> Doktor <input type="checkbox"/> <i>Certificate Falsafah/ PhD</i></p>

BAHAGIAN B

PART B

Keinginan untuk Menghidangkan Buah dan Sayur / Intention to Serve Fruits and Vegetables

Soalan-soalan yang akan ditanya dalam bahagian ini melibatkan jumlah hidangan buah-buahan dan sayur-sayuran yang anda hidangkan untuk keluarga anda setiap hari dan jika anda bercadang untuk menghidangkan lebih banyak buah dan sayur untuk keluarga anda pada masa akan datang.

The next few questions ask about the number of servings of fruit and vegetables you serve your family each day, and if you plan to serve more fruits and vegetables to your family in the future.

Arahan/ Instructions:

Jawab soalan 1. Berdasarkan jawapan anda, sila jawab soalan 2 atau 3. Sila rujuk Lampiran 1 semasa anda menjawab soalan di bahagian ini.

Answer question 1. Depending on your answer, go to question 2 or 3. Please refer to Appendix 1 as you answer questions in this part.

1. Berapakah jumlah hidangan buah-buahan dan sayur-sayuran yang sering anda hidangkan kepada keluarga anda setiap hari? Fikirkan tentang setiap makanan dan makanan ringan anda semasa anda menambah hidangan. Termasuk makanan yang anda makan di luar.

How many servings of fruits and vegetables do you usually serve your family each day? Think about each of your meals and snacks as you add up the servings. Include the meals you eat away from home.

Bulatkan jawapan yang paling tepat.

Circle the best answer.

0	1	2	3	4	5
Kosong/ Zero	Satu/ One	Dua/ Two	Tiga/ Three	Empat/ Four	Lima/ Five
6	7	8	9		
Enam/ Six	Tujuh/ Seven	Lapan/ Eight	Sembilan/ Nine		

Jika jawaban anda adalah 0,1,2,3 atau 4 untuk hidangan buah-buahan dan sayur-sayuran, pergi ke soalan 2. Jika jawaban anda adalah 5 atau lebih untuk hidangan buah-buahan dan sayur-sayuran, pergi ke soalan 3.

If you answered 0, 1, 2, 3, or 4 servings of fruits and vegetables, go to question 2. If you answered 5 or more servings of fruits and vegetables, go to question 3.

2. Adakah anda bercadang untuk menghidangkan buah dan sayur kepada keluarga anda dalam 5 atau lebih hidangan dalam satu hari?

Do you plan to start regularly serving your family 5 or more servings a day?

Tidak, saya tidak bercadang untuk menghidangkan lebih banyak buah dan sayur setiap hari dalam tempoh masa **6 bulan akan datang**.

*No, I do not plan to serve more fruits and vegetables each day in the **next 6 months**.*

Ya, saya bercadang untuk menghidangkan lebih banyak buah dan sayur setiap hari dalam tempoh masa **6 bulan akan datang**.

*Yes, I do plan to serve more fruits and vegetables each day in the **next 6 months**.*

Ya, saya bercadang untuk menghidangkan lebih banyak buah dan sayur setiap hari dalam tempoh masa 30 hari akan datang.

*Yes, I do plan to serve more fruits and vegetables each day in the **next 30 days**.*

3. Berapa lamakah anda telah menghidangkan keluarga anda 5 atau lebih hidangan buah dan sayur setiap hari?

How long have you been serving your family 5 or more servings a day

_____ Kurang dari 6 bulan/ *Less than 6 months*

_____ 6 bulan atau lebih/ *6 months or more*

BAHAGIAN E

PART E

Sila **tandakan** (✓) pada jawapan yang paling sesuai bagi setiap kenyataan yang berikut.

Tick (✓) for the best answer.

1-Selalu benar/ <i>Often true</i>	2-Kadang-kadang benar/ <i>Sometimes true</i>
3-Tidak benar/ <i>Not true</i>	4-Tidak tahu/Menolak/ <i>DK or refused</i>

Kenyataan/ Statement	1	2	3	4
<p>1. “Makanan yang (saya/kami) beli tidak mencukupi, dan (saya/kami) tidak mempunyai wang untuk mendapatkan lebih makanan.” (Untuk tempoh 12 bulan yang lepas) <i>“The food that (I/we) bought just didn’t last, and (I/we) didn’t have money to get more.” (In the last 12 months)</i></p>				
<p>2. “(Saya/kami) tidak mampu untuk makan makanan yang seimbang.” (Untuk tempoh 12 bulan yang lepas) <i>“(I/we) couldn’t afford to eat balanced meals.” (In the last 12 months)</i></p>				

1-Ya/ <i>Yes</i>	2-Tidak/ <i>No</i>
3-Tidak tahu/ <i>DK</i>	

Kenyataan/ Statement	1	2	3
<p>3. Adakah (anda/isi rumah dewasa) mengurangkan saiz makanan atau tidak makan kerana tidak cukup wang untuk membeli makanan ? (Untuk tempoh 12 bulan yang lepas) <i>Did (you/you or other adults in your household) ever cut the size of your meals or skip meals because there wasn't enough money for food? (In the last 12 months)</i></p> <p>3a. JIKA YA, berapa kerap perkara seperti ini berlaku ? (Sila bulatkan jawapan di bawah) <i>[IF YES] How often did this happen ? Please circle the answer below.</i></p> <p>A. Hampir setiap bulan/ <i>Almost every month</i></p> <p>B. Beberapa bulan tetapi bukan setiap bulan/ <i>Some months but not every month</i></p>			

C. Hanya 1 atau 2 bulan/ <i>Only 1 or 2 months</i> D. Tidak tahu/ <i>DK</i>			
Kenyataan/ Statement	1	2	3
4. Adakah anda makan kurang daripada apa yang anda rasa sepatutnya kerana tidak cukup wang untuk membeli makanan ? (Untuk tempoh 12 bulan yang lepas) <i>Did you ever eat less than you felt you should because there wasn't enough money for food? (In the last 12 months)</i>			
5. Adakah anda pernah kelaparan tetapi tidak makan kerana tidak cukup wang untuk membeli makanan ? (Untuk tempoh 12 bulan yang lepas) <i>Were you every hungry but didn't eat because there wasn't enough money for food? (In the last 12 months)</i>			

BAHAGIAN F

PART F

Soalan ini adalah berkenaan gaya pemakanan ibu bapa/penjaga terhadap anak/jagaan.
Sila tandakan (√) pada kotak yang berkenaan.

This questionnaire is regarding to parental feeding style. Please tick (√) in one of the boxes.

1-Tidak pernah/ Never	2-Jarang/ Rarely	3-Kadang-kadang/ Sometimes
4-Kerap/ Often	5-Selalu/ Always	

Kenyataan/ Statement	1	2	3	4	5
Saya membenarkan anak/jagaan untuk memilih makanan apabila waktu makan <i>I allow my child to choose which foods to have for meals</i>					
Saya memberi anak/jagaan sesuatu untuk makan ketika mereka sedih <i>I give my child something to eat to make him/her feel better when s/he is feeling upset</i>					
Saya menggalakkan anak/jagaan untuk menantikan waktu makan <i>I encourage my child to look forward to the meal</i>					
Saya memuji anak/jagaan apabila dia/mereka makan makanan yang saya berikan <i>I praise my child if s/he eats what I give him/her</i>					
Saya membuat keputusan berapa banyak makanan ringan untuk anak/jagaan saya makan <i>I decide how many snacks my child should have</i>					
Saya menggalakkan anak/jagaan makan makanan yang pelbagai <i>I encourage my child to eat a wide variety of foods</i>					
Untuk mengawal kelakuan anak/jagaan, saya berjanji untuk memberikan mereka makanan <i>In order to get my child to behave him/herself I promise him/her something to eat</i>					
Saya menyediakan makanan dengan cara yang menarik/kreatif untuk anak/jagaan <i>I present food in an attractive way to my child</i>					
Jika anak/jagaan tidak berkelakuan baik, saya akan menahan mereka dari makan makanan kegemaran <i>If my child misbehaves I withhold his/her favourite food</i>					
Saya menggalakkan anak/jagaan untuk merasa setiap makanan yang saya hidang <i>I encourage my child to taste each of the foods I serve at mealtimes</i>					
Saya membenarkan anak/jagaan berjalan-jalan ketika waktu makan <i>I allow my child to wander around during a meal</i>					
Saya menggalakkan anak/jagaan merasa makanan yang mereka tidak pernah makan <i>I encourage my child to try foods that s/he hasn't tasted before</i>					
Saya memberi anak/jagaan sesuatu untuk makan apabila mereka					

sedih <i>I give my child something to eat to make him/her feel better when s/he has been hurt</i>					
Saya biarkan anak/jagaan membuat keputusan waktu makan mereka <i>I let my child decide when s/he would like to have her meal</i>					
Saya memberi anak/jagaan sesuatu untuk makan apabila mereka bosan <i>I give my child something to eat if s/he is feeling bored</i>					
Saya membenarkan anak/jagaan membuat keputusan apabila mereka sudah cukup makanan ringan untuk dimakan <i>I allow my child to decide when s/he has had enough snacks to eat</i>					
Saya membuat keputusan apabila tiba masanya untuk anak/jagaan mempunyai makanan ringan <i>I decide when it is time for my child to have a snack</i>					
Saya menggunakan puding sebagai rasuah untuk mendapatkan anak/jagaan makan hidangan utama <i>I use puddings as a bribe to get my child to eat his/her main course</i>					
Saya menggalakkan anak/jagaan untuk menikmati makanan mereka <i>I encourage my child to enjoy his/her food</i>					
Saya yang membuat keputusan waktu makan anak/jagaan <i>I decide the times when my child eats his/her meals</i>					
Saya memberi anak/jagaan sesuatu untuk makan apabila mereka risau <i>I give my child something to eat to make him/her feel better when s/he is worried</i>					
Saya memberi ganjaran makanan kepada anak/jagaan apabila mereka berkelakuan baik <i>I reward my child with something to eat when s/he is well behaved</i>					
Saya membiarkan anak/jagaan makan di antara waktu makan <i>I let my child eat between meals whenever s/he wants</i>					
Saya menegaskan anak/jagaan makan di meja <i>I insist my child eats meals at the table</i>					
Saya memberi anak/jagaan sesuatu untuk makan apabila mereka marah <i>I give my child something to eat to make him/her feel better when s/he is feeling angry</i>					
Saya yang membuat keputusan apa yang anak/jagaan makan di antara waktu makan <i>I decide what my child eats between meals</i>					
Saya memuji anak/jagaan apabila mereka makan makanan baru <i>I praise my child if s/he eats a new food</i>					

BAHAGIAN G PART G

Arahan/ Instructions:

1. Anda diminta untuk mencatat makanan yang dimakan **anak** anda pada **dua** hari yang tertentu (**satu** hari biasa dan **satu** hari pada hujung minggu). Sila rekod **semua** makanan yang dimakan anak anda.

*You are required to record the food that your **child** eats on **two** particular days (**one** weekday and **one** day during the weekend). Please record all foods.*

2. Makanan yang dimakan hendaklah direkod secara **terperinci** (kaedah masakan dan kuantiti yang dimakan).

*Be as **specific** as possible when describing the food item eaten (cooking method and the amount eaten).*

3. Sebaik mungkin masukkan jenama makanan jika ada.

Include brand names if any.

4. Hanya merekod jumlah makanan yang dimakan oleh anak (contoh: 1 ketul kepek ayam goreng).

Record only the food portion that was actually eaten (example: 1 piece of chicken wing).

5. Rekod jumlah makanan yang dimakan mengikut **sukatan alatan rumah** (contoh: cawan, sudu makan, mangkuk, keping/potong dan sudu teh) .

*Record amounts in **household measures** (example: cups, tablespoons, bowls, slices and teaspoons).*

6. Masukkan kaedah masakan yang digunakan (contoh: segar, kukus, goreng, bakar, tin, mentah atau panggang).

Include the cooking method that was used to prepare the food (example: fresh, stewed, fried, baked, canned, broiled, raw or braised).

7. Untuk makanan di dalam tin, masukkan jenis cecair yang ditinkan (contoh: buah-buahan koktail/ tuna bersama minyaknya).

For canned foods, include the liquid in which it was canned (example: fruit cocktail in light syrup or tuna in oil).

8. Anda diminta untuk merekod jumlah lemak yang kelihatan (contoh: minyak, mentega, margerin, dan sebagainya).

Remember to record the amount of visible fats (example: oils, butter, salad dressing, margarine) you eat or used in cooking.

HARI BIASA/ WEEK DAY
DATE:

TARIKH/

Masa/ Hidangan Time/ Meals	Jenis makanan Food item	Saiz hidangan Portion size	Cara masakan/ Jenama Cooking method/ Brand name
Sarapan/ Breakfast			
Minum pagi/ Morning tea			
Makan tengahari/ Lunch			
Minum petang/ Afternoon tea			
Makan malam/ Dinner			
Makan lewat malam/ Supper			

HARI CUTI/ WEEK END

TARIKH/ DATE:

Masa/ Hidangan Time/ Meals	Jenis makanan Food item	Saiz hidangan Portion size	Cara masakan/ Jenama Cooking method/ Brand name
Sarapan/ Breakfast			
Minum pagi/ Morning tea			
Makan tengahari/ Lunch			
Minum petang/ Afternoon tea			
Makan malam/ Dinner			
Makan lewat malam/ Supper			

LAMPIRAN 1

APPENDIX 1

1 saiz hidangan berukuran/ *1 serving size is:*

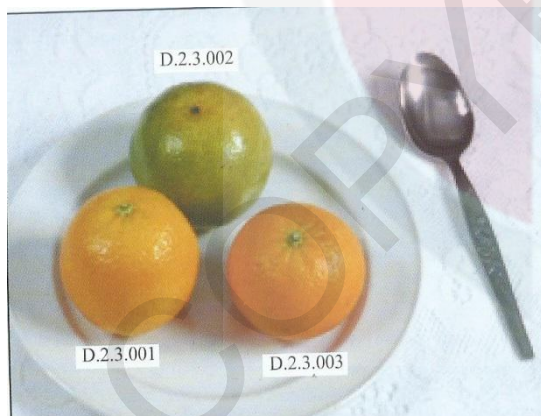
1 biji epal/ *1 whole apple*



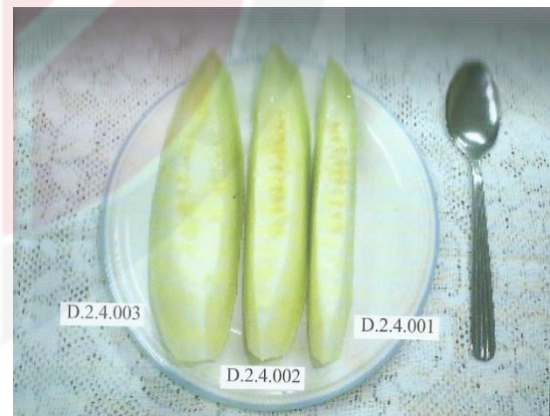
1 biji pisang/ *1 whole banana*



1 biji limau/ *1 whole orange*



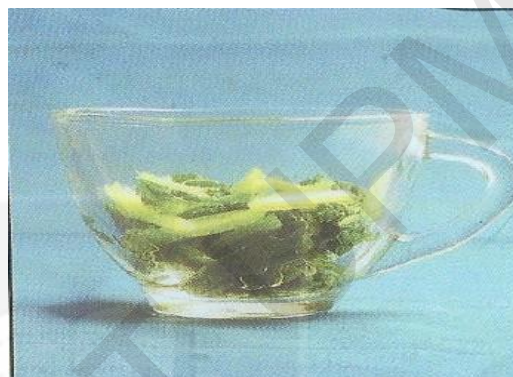
1 potong tembikai susu/ *1 slice honey dew*



1 cawan sawi mentah/ *1 cup mustard leaves, Chinese, raw*



½ cawan sawi masak/ *½ cup mustard leaves, Chinese, cooked*



1 cawan lobak merah/ *1 cup carrot*



1 cawan kobis/ *1 cup cabbage*



1 cawan sengkuang/ *1 cup yam bean*



12 tangkai pucuk ubi mentah/ *12 pieces tapioca shoots, raw*



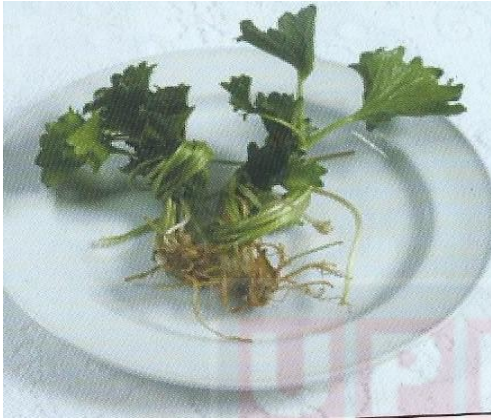
10 tangkai celur daun selom/
10 pieces selom



10 tangkai kangkung mentah/
10 pieces water convulvolus,raw



1 ikat pegaga/ 1 bunch *Indian Pennywort*



6 biji petai/ 6 whole petai

