Parents in Preparing Meal for Children: Knowledge, Attitude and Practice

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Abstract

The upbringing has the greatest influence on children's food and physical activity habits. Parents play a crucial role in moulding their children's health behaviours through their habits form in early life. Parents have a major impact on their children's eating habits and food choices. Children's poor eating habits and food choices are led to serious health consequences. In Southeast Asia, Malaysia has known as the highest obesity rate. At the same time, it is estimated that one-fifth of Malaysian children under the age of five are stunted owing to malnutrition. The study is focusing on the knowledge, attitude and practice variables among parents during preparation of children's food. The controlling of food habit, food intake, physical activities, selection of the nutritious food and food safety and sanitation from home are crucial. Thus, the participants of the study included 138 parents with children. The analyses involved descriptive statistics, Pearson's correlation and multiple regression analysis. Children learn their habits and action from the perspective of what they see through their eyes and in turn they imitate and follow the parent's practise. The huge commitment and willingness of the parents can change the future children's health, cognitive and physical.

Keywords:

Food Preparation; Parents; Knowledge; Attitude; Practice; Children Meal

1 Introduction

The upbringing has the greatest influence on children's food and physical activity habits. Parents play a crucial role in molding their children's health behaviors through their habits form in early life. Parents have a major impact on their children's eating habits and food choices (De-Jongh González et al., 2021; Ngozika & Ifeanyi, 2018; Golan et al., 2006). Poor eating habits and food choices are lead to serious health consequences (Alakaam et al., 2015; Deshpande et al., 2009). Parents as a role model in early life of children is crucial to direct them in healthy eating habit and food choice (Chapman et al., 2021). The early years of a child's life are one of the most active stages of development, encompassing both physical and mental growth (Murray, 2020; Jukes et al., 2002).

Malaysia has the highest obesity rate in Southeast Asia. At the same time, it is estimated that one-fifth of Malaysian children under the age of five are stunted owing to malnutrition. Stunting is the most common form of undernutrition and is a largely irreversible outcome of inadequate nutrition during the first thousand days of a child's life (Abdul & Wan, 2020). Overweight, obesity and malnutrition (stunting) as early in child life might be a factor to the later adulthood health (Partap et al., 2019; World Health Organization, 2016).

Children learn and adapt eating habits from their families, which is an essential social environment. Parents, in particular, influence children's food cognitions and choices through a health promoters, role models, and educators (Yee et al., 2017). Regrettably, today's millennial family is not the same as prior generations. As the center of the family, the mother works alongside the father as a career woman. As a result, parents' busy daily routines may distract them from teaching, promoting, and educating their children about healthy eating habits and food selection. Fast food, convenience food or meal eaten outside of home is among of selection for the family (Sharif Ishak et al., 2020; McDonald et al., 2018; Suhaimi et al., 2017).

Thus, the goal of this study was to understand the parent's knowledge, attitude and practice on preparation of children food. The study sought to answer 3 research questions:

- i. How the parents apply the food knowledge in preparing meal for the children?
- ii. What is the attitude of the parents in preparing meal for the children?
- iii. Do the parents practice the food knowledge in preparing meal for the children?

2 Literature Review

2.1 Obesity, overnutrition and stunting among children in Malaysia.

Malaysia has the highest obesity rate in Southeast Asia (Abdul & Wan, 2020). Generally, obesity is result from lack of physical activity and poor eating management. Meanwhile, according to Porter et al., (2018) children has large appetite and quicker weight gain, had higher hunger ratings, greater pleasure of food, faster rate of eating, and lower satiety response. This is one of the reasons which can lead toward the obesity and overweight among children. The study from Poh et al., (2013) has revealed that overnutrition was found to be more common than undernutrition in Malaysia. The high frequency of vitamin D deficiency, as well as insufficient calcium and vitamin D intake, are cause for concern. Also, supported by Partap et al., (2019), in their study is show that children has burden with stunting problem in following the standard of international height reference due to nutrition insufficiency and role of the parents.

According to a recent study by Sarma et al., (2017), several socio-demographic, health, and feeding-related factors are major drivers of stunting. Stunting is linked a variety of negative effects later in life, including cognitive impairment and poor educational success. It is thought to be caused by a lack of nourishment (Partap et al., 2019). As a result, measures for improving the nutritional condition of Malaysian children must consider prevention initiatives for overweight and obesity, overnutrition, undernutrition (stunting). This preventive measure it should started from role of parent in guiding the children with knowledge and correct measures.

Unfortunately, rapid urbanization has resulted in a shift in family living style, and as a result, children adjust to a more sedentary lifestyle, which includes a deficiency of nutritious food, a lack of physical exercise, as the children seen by their parents (Suhaimi et al., 2017; Lau et al., 2013; Dan et al., 2011).

2.2 Parents role and preparing meal

Parents are the primary gatekeepers for their children. Thus, parent's behaviour has the ability to influence the home's physical and social environment among children (Vaughn et al., 2016). In encouraging a good food habit and food choice at early age for the benefit of children health (Yee et al., 2017). Unfortunately, parents in today's society are more likely to expose their children to modern life practices that may impact bad food habits and a lack of physical exercise in their children (Suhaimi et al., 2017). Meanwhile, according to Ngozika and Ifeanyi, (2018), a child of 0-3 years old who has a mother that applies a healthy routine, 27% chance that the child will be more likely to become healthy and implement the similar healthy routine.

Furthermore, the level of income among parents also impacts the healthy lifestyle growth of the children (Buoncristiano et al., 2021). As example, high-income parents are more likely to eat natural produce, exercise daily, and raise their children with the finest

conditions meanwhile, low-income parents are more prone to engage in unhealthy behaviors such as the cheaper and innutritious selection of the food/ food preparation (Case & Paxson, 2002). According to studies by Suhaimi et al., (2017) and Donkin et al., (2014), impoverished families have a higher proclivity to obesity due to a lack of access to healthy foods such as vegetables and fruits, as compared to high-income families. Moreover, Olfert et al. (2019) has affirmed in the study that teaching children food preparation skills and engaging them in family meal preparation can enhance diet quality and favorably affect the home environment for childhood obesity prevention.

2.3 Knowledge, Attitude and Practice

Parents should have a basic understanding of how to manage their children's nutritious food in order to help them live a healthier lifestyle (Scaglioni et al., 2018). Knowledge is based on a combination of experience, relevant information, and competent insight that provides a structure for estimating and integrating new experiences and information. On the other hand, parents should be aware of the nutritional worth of the food they consume because it has an influence on their children's emotions. Similarly, emotional overeating (eating response to negative emotions) has long been associated to higher consumption of high-calorie meals and sugary beverages (Goodman et al., 2020)

Furthermore, it is important for parents to acquire the optimum BMI for their children because BMI is a fundamental knowledge indicator for healthy children. While some studies have shown no relationship between disruptive behavior at mealtime and BMI, others have found that children who participate in disruptive behavior are more likely to have a higher BMI and consume a lower-quality diet (Goodman et al., 2020). Discipline parents were consistently found to generate children who ate well and exercised often as well as a better BMI (Ogden & Roy-Stanley, 2020).

Relationship between parenting and children's eating is related, parents' practices influencing and being impacted by children's behaviors interchangeably related. Previous research mostly concentrated on the impact of parents on their children's behaviours in occur mindful feeding, problematic mealtime behavior and other attitude from children behavior. Thus, researchers have looked at both general parenting styles and particular feeding methods to see how they affect child outcomes (Goodman et al., 2020). Indirectly, the mother's creativity in serving food and her care for food safety when preparing food for their children should be emphasized. According to Philippe et al., (2021) parents' food parenting techniques and styles have a significant impact on their children's eating habits and preferences. Furthermore, previous analysis demonstrates that influential parenting is correlated to feeding practices in practicing healthy eating, which are attributed to positive outcomes like as increased fruit and vegetable consumption (Goodman et al., 2020). Food sanitation and hygiene during food preparation for growing child is crucial. Malnutrition, poor hygiene, and sanitation are core drivers of malnutrition in children, with growth retardation, poor cognitive

development, low productivity owing to feebleness, and death as a result (Azupogo et al., 2019).

Parental duties should be played in order to promote a healthy lifestyle in the family, particularly in terms of nutritional food intake and food sanitation. Studies show that a child's dietary preferences can be influenced by their environment (Lopez et al., 2018). In terms of exposure, family and friends have the same impact level in shaping children's behavior and decision-making (Ragelienė & Grønhøj, 2021). Parents have a critical role in boosting children's exposure to nature, and eating nutritious meals can assist to improve and preserve health (Ogden & Roy-Stanley, 2020). Improving good eating habits in the home is a simple approach to start.

3 Methodology

3.1 Participants

Participants included 138 parents with children from age range of 6 months old to 12 years old. The participants were recruited by messaging platform WhatsApp to get fast and simple application. The study collects data from participants via simple convenience sampling, with a screening question at the beginning of the questionnaire to verify that the correct participants are included in the study. Participants reported their gender, age, income, education level and the number of children of the parents.

The sample comprised of 138 parents of children include both mothers (n= 91) and fathers (n=47). The parent marital status 3.7% is divorced among 138 parents, meanwhile 12.5% is single parent expected who are adopted parents. Widow or widower is 6.6% among the status of marital. Lastly the married parent is the major participants in this study which is 77.2%. The overall numbers of children in each parent are 41.9% for 1 to 2 child, 3-4 child is 39.7% and the child for more for 5 for each parent are 18.4%.

Regarding income, 19.9% income of family is below than RM1999, meanwhile 30.1% a total income of family is between RM2000 to RM3000. 27.2% is reported for family income of between RM3000 to RM3999 and lastly, 22.8% is income form above RM4000. Lastly, the education level of parent is for the highest percentage is Diploma is 34.6% (n=47), follow by parents with high school level with 29.4% (n=42), bachelor's degree 27.9% (n=40), Master's degree 5.1% (n=7) and PhD level is 2.9% (n=4).

3.2 Instrumentations

The instrumentation of survey was used to develop the variables to collect the quantitative data in the study framework. The dependent variable was the parents preparing children's meals. The independent variables were knowledge, practice and attitude of parents on preparing the food for child.

The study was conducted using the Likert-type scale which provides a five points scale which is used to allow the individual to express how much they agree or disagree with a particular statement. The five-point Likert scale was starting with a minimum "1" for disagreement of the statement and a maximum of "5" a strong agreement of statement.

The questionnaires in this study is adopted from Tang et al., (2020) for knowledge attribute included items criteria of parents' knowledge in preparing meals about the understanding of food pyramid, vegetables and its benefits, consumption of salty snacks, food safety knowledge and understanding of the cooking environment. Meanwhile, attitude items in questionnaire adopted from Shohaimi et al., (2014) included items concerning parental attitudes on controlling children's healthy diet, selection of healthy foods, attitude of eating together, frequency of cooking food at home and frequency of eating outside food. Lastly, practice items in questionnaire adopted from Duncanson et al., (2013) .It is used to take data on parent's practice knowledge in preparing meals about the frequency in preparing meals at home during busy time, practicing food hygiene, food safety, control portion size and parental support.

3.3 Analyses

Data were analysed and assessed using the SPSS Statistic version 26. The analyses involved descriptive statistics are used to define or summarise data in a meaningful and useful manner that showed frequencies, mean and standard deviation. Also, this study assessed Pearson's correlation analysis among the variables and multiple linear regression analysis to assess the relationship between dependent and independent variables.

3.3.1 Descriptive Analysis

The mean score derived from this descriptive analysis is used to confirm the respondent's level of agreement with the assertions in the questionnaire. A mean score of less than 2.99 indicates that respondents disagree with the statement linked to the variables, whereas a mean score of 3.00 to 3.99 indicates that respondents either marginally agree or agree with the statement related to the variables. Finally, a mean score of 4.00 to 5 indicates that the respondents strongly agree with the statements made in relation to the three variables in the questionnaire.

From the mean score of the research, which includes knowledge, attitude, practice and meal preparation among of parents are reflecting the food habit and health behaviour on the child as tabulated in Table 1, Table 2, Table 3, Table 4 and Table 5.

Knowledge

Table 1: Parents' knowledge in preparing meal

Items	N	Mean	Std. Deviation
K1 - I have a clear understanding about the food pyramid and their function.	138	4.33	.708
K2 - I know how different vegetables are cultivated and the benefits	138	4.31	.809
K3 - I believe consumptions of salty snacks e.g., chips, corn puffs, etc. is harmful for my children's health	138	4.67	.756
K4 - I believe food safety knowledge is important to ensure food is prepared in a safe manner	138	4.81	.445
K5 - I believe by maintaining a clean cooking environment is a good way to control food safety	138	4.79	.459
Valid N (listwise)	138		

Scale: 1=Strongly disagree, 2=Disagree, 3=Neither agree nor disagree, 4=Agree,5=Strongly Agree

The first research question of this study is to identify the food knowledge in preparing meal for the children. The knowledge is not limited to only food, it is also involved with food safety and sanitation as well. Thus, the result has shown that the majority of parent highly understand and applied the food knowledge during preparation of meal for their children based the on the agreement on mean score.

Attitude

Table 2: Parents' attitude in preparing meal

Items	N	Mean	Std. Deviation
A1 - I am always control children's healthy diet	138	3.93	.933
A2 - I always choose healthy foods and prepare them in healthful ways	138	4.68	.540
A3 - I will make sure my children to eat together as family when mealtime	138	4.73	.586
A4 - I often try out different foods or foods that are not part of everyday meals with my children	138	3.86	.922
A5 - I often buy food outside and make sure the food I buy is nutritious enough for my children	138	4.54	.663
Valid N (listwise)	138		

Scale: 1=Strongly disagree, 2=Disagree, 3=Neither agree nor disagree, 4=Agree,5=Strongly Agree

The second research question is to recognize the attitude of the parent in preparing meal for the children. The data has shown that most of the parents are on items of A1 and A5 were slightly agree and disagree with the statement, where the mean score in between 3.93 to 3.86 The rest of items has shown that the majority of parents are strongly agree with the statement.

Practice

Table 3: Parents' practice in preparing meal

Items	N	Mean	Std. Deviation
			Deviation
P1- I am prepare healthy food for children's healthy diet	138	3.89	.885
P2 - I am practicing food hygiene before, during and after preparation meals	138	4.54	.716
P3 - I am practicing food safety. As example, short nails, always wash hand and ensure no pesticides or hazardous ingredients during preparing meal	138	4.43	.704
P4 - I know how to portion control size for my children. 1/4 complex carbohydrates, 1/2 vegetables and fruits and 1/4 good quality protein	138	4.30	.841
P5 - I am always practicing parental support like having meals together and being firm in selecting healthy food for my children	138	3.62	.991
Valid N (listwise)	138		

Scale: 1=Strongly disagree, 2=Disagree, 3=Neither agree nor disagree, 4=Agree,5=Strongly Agree

The third research questions are to identify the parent's practice on food knowledge in preparing meal for the children. The data has shown that the items of P1 and P4 were slightly agree and disagree. Meanwhile, the rest of the items, respondents are strongly agreed with parents' practice in preparing the meal for their children.

Preparation Meal for Children Among Parent

Table 4: Preparation meal for children among parent

Items	N	Mean	Std.
			Deviation
PM1 – I am preparing fresh cooked food for children	138	4.33	.708
PM2 – I am controlling the suitable portion for my children	138	3.86	.922
PM3 – I am strict with the time that my children should eat	138	4.73	.586
PM4 - I often buy food outside and make sure the food I buy is nutritious enough for my children	138	4.54	.663
PM5 - I am preparing a healthy snack for my children	138	4.54	.663
Valid N (listwise)	138		

Scale: 1=Strongly disagree, 2=Disagree, 3=Neither agree nor disagree, 4=Agree,5=Strongly Agree

Last variable was to identify meal preparation among parent for children. The data has shown that item of PM2 are slightly agree and disagree. As the other items, respondents are strongly agreed with the preparation meal that has been prepared for their children.

Descriptive analysis was computed to identify the mean score and standard deviation of the variables. Table 4 shows the summary results of descriptive analysis for this study. Knowledge has the highest mean score of 4.5841 followed by attitude, preparation meal for children and practice in preparing meal for children among parents.

Table 5: Summary of Descriptive statistic.

	Mean	Std. Deviation	N
KNOWLEDGE	4.5841	.41998	138
PRACTICE	4.1565	.55091	138
ATTITUDE	4.3493	.48333	138
PREPARATION MEAL FOR CHILDREN	4.3159	.49689	138

3.3.2 Pearson Correlation Analysis

The strength and direction of the linear relationship between two variables is analyzed through Pearson Correlation. Table 5 has shown the positive relationship between Knowledge, Attitude, Practice and Preparation Meal for Children among parents. Thus, through the analyses, it shown that the result of relation between Attitude and Preparation Meal for Children among parents with r value of .787; followed by Practice and Preparation Meal for Children among parents has a strong positive significant relationship with r value of .765; and lastly Knowledge and Preparation Meal for Children among parents with r value of .632. Overall results revealed that r value of .530 is for RQ 1, r value of .514 is for RQ 2 and r value of .434 for RQ 3

Table 6: Summary of Pearson Correlation Analysis

Correlations							
		KNOWLEDGE	PRACTICE	ATTITUDE	PREPARATION MEAL FOR CHILDREN		
KNOWLEDGE	Pearson Correlation	1	.434**	.514**	.632**		
	Sig. (2-tailed)		<.001	<.001	<.001		
	N	138	138	138	138		
PRACTICE	Pearson Correlation	.434**	1	.530**	.765**		
	Sig. (2-tailed)	<.001		<.001	<.001		
	N	138	138	138	138		
ATTITUDE	Pearson Correlation	.514**	.530**	1	.787**		
	Sig. (2-tailed)	<.001	<.001		<.001		
	N	138	138	138	138		
PREPARATION MEAL FOR CHILDREN	Pearson Correlation	.632**	.765**	.787**	1		
CHILDREN	Sig. (2-tailed)	<.001	<.001	<.001			
	N	138	138	138	138		

3.3.3 Multiple Linear Regression Analysis

To determine which predictor factors may best describe the dependent variable, multiple linear regression analysis was utilized in this study. The beta value for Attitude is .446 which is the largest value among the independent variable that has strongest unique contribution in this study followed with; Practice is .436. Meanwhile beta value for Knowledge is the less strong among of the variable which is .213.

The results also revealed that the value of sig. of all variables which are results less than .05 which mean the variable is significantly unique contribution to the predictor of dependent variable. Thus, from all the results indicated in Table 6, has shown that the relationship between independent variable of this study (Knowledge, Attitude and Practice) has a significant relationship with dependent variable (Preparation Meal for Children among Parents) in this study. The whole model summarized that the Adjusted R² value is .815, which 81.5% indicates that the dependent variable can be explained by Knowledge, Attitude and Practice.

Table 7: Summary of Multiple Linear Regression

Coefficients ^a								
Unstandardized Coefficients Standardized Standardized 95.0% Confidence Inte								nce Interval for
Model	I	В	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	470	.215		-2.191	.030	895	046
	KNOWLEDGE	.252	.052	.213	4.858	<.001	.149	.355
	ATTITUDE	.459	.048	.446	9.571	<.001	.364	.553
	PRACTICE	.393	.040	.436	9.829	<.001	.314	.473
a. I	Dependent Varial				3.023	1.001	.514	.47

4 Discussion

Malaysia has publicly known that the highest obesity rate and overnutrition among children (Abdul & Wan, 2020), as well stunting problem of children due to lack of certain nutrition (Haidar et al., 2017). The good and balance nutrition are certainly coming from the nutritious food, especially home food that prepared by the parents or the selection of packed food from restaurant or stall, and or a convenience food from store. Due to the reason, this aim of this study is to understand the parent's knowledge, attitude and practice on preparation of children food in descriptive, correlation and regression analysis.

The result found in this study shown that the attribute of knowledge in preparing the meal for children is that the majority of the parents already had acquired some knowledge in preparing meals prior to note. The result is shown that parents has sufficient knowledge regarding nutrition information for children to maintain eating healthy food to avoid the problem regarding obesity, overnutrition, stunting and food safety. This is supported by Abdul & Wan, (2020); Vaughn et al., (2016) that maintaining health among children is the parent's responsibility. Likewise, food safety and cleanliness during food preparation are critical to avoid food poisoning and risky food preparation, to ensuring a hygienic cooking processes for children to grow their antibodies strong in preparation for both cognitive and physical development (Zyoud et al., 2019).

Through multiple linear regression analysis, it was found that through analysis, Attitude is the strongest significant and followed with Practice and Knowledge. It is mean that the attitude, eating habits and child-feeding techniques of parents have an impact on children's academic achievement. Parent should act as role models and utilize the best feeding methods possible on children's nutritional habits that advantageous impact on their weight and growth (Scaglioni et al., 2018).

This study has revealed that a parent has showing the good attitude in preparing the meal for children. As nowadays parents in household are embracing the fact of career women for the mother and perhaps family hectic daily life, the tendency to buy outside food is higher. Not all the parents are strict in terms of nutritional information regarding the food to feed their children. As discussed by the study Ryckman et al., (2021), the purchase of outside food from the restaurant or food stall are taking from the considerations includes ability to purchase, as well as a role of tradition, and sociocultural of decision—making, gender norms that affect food in the household allocation.

The aim of parents to make their own food for their children is positively associated to their subjective norm of functional (healthy) foods. It can be observed in the results of parents who consistently practice parental support, along with providing healthy meals, eating meals together, and being enthusiastic about choosing healthy food for

their children. Nonetheless, it is reasonable to believe that parents continue to use proper methods in preparing nutritious foods, which may affect their desire to purchase high-quality goods (Petrescu et al., 2020).

5 Conclusion

The controlling of food habit, food intake, physical activities, selection of the nutritious food, food safety and sanitation from home are crucial. Children develop their habits and actions based on what they observe from home. Hopefully, parent-based initiatives aimed at preventing childhood overweight and obesity, overnutrition, undernutrition (stunting) will result in a greater knowledge of how food-related parenting practices and parenting style impact the nutritional quality of children food intake. The huge commitment and willingness of the parents can change the future of children's health, cognitive and physical. Positive, healthy, and lifelong learners are aided by excellent parental support.

Lastly, the local authority in collaboration with the Health Ministry should create an avenue for nutrition education for the communities at all contact points through mass media to educate the community on essential nutrition information and signs to help increase their knowledge in practicing healthy eating of children.

6 About the author

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