



UNIVERSITI PUTRA MALAYSIA

***PARENTAL-CHILD FEEDING PRACTICES AND ITS ASSOCIATED FACTORS
AMONG PAEDIATRIC OUTPATIENT IN HPUPM.***

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A project submitted as a partial fulfillment of the requirement for the degree of
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ABSTRACT

PARENTAL-CHILD FEEDING PRACTICES AND ITS ASSOCIATED FACTORS AMONG PAEDIATRIC OUTPATIENT IN HPUPM.

NADIAH SYAHIRAH BINTI SHUHAIMI

Parental child feeding practices are eating specific behaviors, food or strategies that parents use to influence what, how and when their children eat. Therefore, they play an important role in the development of their children eating behavior and the subsequent weight status. This study aimed to investigate the associations of sociodemographic, medical history, anthropometric data, dietary intake and household environment with parental-child feeding practices among paediatric outpatients in HPUPM. Mother of the children (n=61) completed an online questionnaire includes Sociodemographic, anthropometric measurements, parental-child feeding practices and household environment family meal routine. While 24-hour dietary recall was interviewed by the researcher. The medical history of respondents was acquired from the hospital medical records. Parental-child feeding practices and family meal routine was measured based on the Child Feeding Practices (CFP) questionnaire and the Family Ritual Questionnaire dinnertime scale. SPSS version 26 with the significance level is set at $p < 0.05$ and Pearson's correlation were used to analyse the data. Majority of children's age range were toddlers aged 2 to 3 years old 39.3%, male 52.5%, about 91.8% of the children were Malays. Not majority of the children had an overweight BMI-for- age z score of 24.6%, small proportion of the children was underweight 23% and most of the children was normal 52.5%. The highest mean are Practices which include subdomains Restriction, Pressure to eat and Monitoring 12 ± 1.7 followed by Beliefs includes Perceived responsibility, Parental perceived weight and Perceived child weight 9.5 ± 1.2 and the lowest mean were Attitude with the subdomains Parents' concern about the child's weight 3.3 ± 1.0 . The mean values for total energy intake are 1397.59 ± 665.22 . In conclusion, there were no significant association between Sociodemographic, anthropometry and 24-hour dietary intake with parental-child feeding practices ($p > 0.05$).

ABSTRAK

PENGAMBILAN MAKANAN KANAK KANAK DAN FAKTOR- FAKTOR BERKAITAN DALAM KALANGAN PESAKIT LUAR PEDIATRIK DI HPUPM.

NADIAH SYAHIRAH BINTI SHUHAIMI

Amalan pengambilan makanan kanak kanak ialah tingkah laku pemakanan, makanan atau strategi tertentu yang digunakan oleh ibu bapa untuk mempengaruhi apa, bagaimana dan bila anak mereka makan. Oleh itu, mereka memainkan peranan penting dalam perkembangan tingkah laku makan anak-anak mereka dan status berat badan seterusnya. Kajian ini bertujuan untuk menentukan perkaitan sosiodemografi, sejarah perubatan, data antropometri, pengambilan diet dan persekitaran isi rumah dengan amalan pemakanan ibu bapa dan anak dalam kalangan pesakit luar pediatrik di HPUPM. Ibu kepada anak-anak (n=61) melengkapkan soal selidik dalam talian termasuk Sosio-demografi, pengukuran antropometri, amalan pemakanan ibu bapa-anak, pengambilan diet dan rutin makan keluarga persekitaran isi rumah. Pengambilan diet telah ditemu bual oleh penyelidik. Sejarah perubatan responden diperoleh daripada rekod perubatan hospital. Amalan pemakanan ibu bapa-anak dan rutin makan keluarga diukur berdasarkan soal selidik Amalan Pemakanan Kanak-kanak (CFP) dan skala makan malam Soal Selidik Ritual Keluarga. SPSS versi 26 dengan aras keertian ditetapkan pada $p < 0.05$ dan korelasi Pearson digunakan untuk menganalisis data. Majoriti lingkungan umur kanak-kanak adalah kanak-kanak berumur 2 hingga 3 tahun 39.3%, lelaki 52.5%, kira-kira 91.8% kanak-kanak adalah Melayu. Bukan majoriti kanak-kanak mempunyai skor z BMI-untuk-usia berat badan berlebihan 24.6% dengan sebahagian kecil kanak-kanak kurang berat badan 23% dan kanak-kanak normal 52.5%. Min tertinggi ialah Amalan yang merangkumi subdomain Sekatan, Tekanan untuk makan dan Pemantauan 12 ± 1.7 . Diikuti oleh Kepercayaan termasuk Tanggungjawab yang dirasakan, Berat badan yang dirasakan ibu bapa dan Berat badan yang dirasakan anak 9.5 ± 1.2 dan min yang paling rendah ialah Sikap dengan subdomain Kebimbangan ibu bapa tentang berat anak 3.3 ± 1.0 . Nilai min bagi jumlah pengambilan tenaga ialah 1397.59 ± 665.22 . Kesimpulannya, tidak terdapat perkaitan yang signifikan antara Sosio-demografi, antropometri dan pengambilan pemakanan dengan amalan pemakanan ibu bapa-anak ($p > 0.05$).

CHAPTER 1

INTRODUCTION

1.1 Background

Parental child feeding practices are eating specific behaviors, food or strategies that parents use to influence what, how and when their children eat. Therefore, they play an important role in the development of their children eating behavior and the subsequent weight status (Russell et al., 2018). As feeding practices are most likely to be modifiable, they have a pivotal role for behavior change action focusing on improving children's diet during the malleable period during the early life and consecutively reducing the risk of overweight and their consequences (Russell et al., 2018).

It has also been suggested that parental child feeding practices differ widely and with socio-economic status and ethnicity (Yang et al., 2018). Certainly, the intention is to shift parental child feeding practices away from behaviors that are correlated with poorer dietary intake and approaching to those that support the development of better and healthier food intakes (Russell et al., 2018). One of the ultimate frequent investigation about parental feeding practices is the use of parental control such as parental pressure to consume certain types of foods and parental restriction of unhealthy food (Liszewska et al., 2018). Another study by Einzenmann & Holub (2007) stated that permission is other control related practices that attribute to giving control to the child and allowing children to decide their own choices about healthy or unhealthy dietary food intake. In reaction to their children's rejection of nutritious food such as vegetables, parents may begin to use permissive practices, giving the child some autonomy and choice over his or her eating habits (Holley et al., 2018).

Malaysia is an Asian developing country where a third of urban school-aged children are overweight or obese, according to recent reports (Poh et al., 2013) which shows a consistent data from developed countries (Ogden et al., 2014). Birch and colleagues found evidence in two research that suggests that a child's weight status is linked to parental restrictive feeding practices (Gray et al., 2010). Furthermore, with rising urbanization and the adoption of westernized traditions and practices, Malaysia, like other emerging countries, is undergoing substantial environmental change (Yang et al., 2018). The Family environment is the key element influence the development of food choices, eating behaviors, energy intake, physical activity patterns, and preferences, which can therefore impact the weight status (Yang et al., 2018). It should also important to recognize that parent-child relationships are bidirectional which parents influence their children and children also influencing parenting practices within the shared environment (Yang et al., 2018). In addition, little information is known about the impact of child-feeding practices on the nutritional status of children in developing countries.

Outpatient clinics which are also equally referred to as a hospital care setting may have children attended with different types of feeding practices. The children are usually presented with medical conditions that resulting in the need of related services or medical care for particular existing treatments and interventions (Daniel et al., 2008). These medical conditions could be a acute or chronic diseases which are long-term health problems caused by genetic abnormalities, environmental factors, or a combination of the two (Torpy et al., 2007).

1.2 Problem statement

Parental feeding practices are particular practices that parents apply during eating such as restriction to less healthy food, pressure to eat healthy food, the use

of rewards for food consumption and by monitoring the children food intake (Birch et al., 2001). For this reason, parent-child feeding practices are an important factor that can influence their children's eating patterns in a positive way or can also influence negatively (Wardle & Carnell, 2007) reported that the systematic research aimed in understanding the factors of parental feeding practices in diverse population along those with lower socioeconomic status are limited and the impact of socioeconomic status on child feeding practices remains ambiguous. It is also been suggested that parental feeding habits differ greatly depending on ethnicity and socioeconomic status (Hurley et al., 2011). In some Asian cultures such as Malaysia, extended family members such as grandparents and other caretakers are frequently present in the home setting (Wang et al., 2014). Thus, this family setting inside an obesogenic environment may have an impact on children's eating habits and food consumption patterns. However, in developing nations this has yet to be determined (Pollard et al., 2011).

Parental feeding practices are ingrained in their own feeding styles and may differ based on parental perceptions and concerns of children's risk for acquiring a problem in the food domain which includes increase weight status. This condition may also differ within the parents and same family, from child to child (Sathananthan & Tellambura, 2002).

Nonetheless, little is known regarding the impact of child-feeding practices on children's nutritional status in developing countries. Specific sorts of parental regulation of eating behavior that influence children's weight-related health outcomes have been the focus of reviews of parental feeding practices (Collins et al., 2014). In contrast to other methods of general feeding control, study by Faith and colleagues (2004) found positive association between weight status and

restrictive feeding practices. Previous review reported by Wardle and Carnell (2007) found a variety of research design in a review of families from developed countries. The results were unclear in that parental control resulted in reduced or higher adiposity, or had no effect on children's eating and weight status (Wardle & Carnell, 2007). Previous systematic review published by (Hurley et al., 2011) stated that responsive eating and child weight status in high income countries also had uncertain results. It is also believed that children with medical conditions are presented with eating behaviors issues such as feeding problems. (Carruth et al., 2004) In fact, there is limited information on the link of children weight status and parental feeding practices especially when considering the context of the developed countries (Yang et al., 2018)

This study was designed to answer the following research questions:

1. What are the most common issues of parental-child feeding practices among paediatric outpatient?
2. What are the factors associated with parental-child feeding practices with familial-child characteristics children attending the outpatient clinic?

1.3 Significance of the study

It is important to consider that there is still uncertainty, whether parental feeding practices based on control precede or are a consequences of children's body weight status. Data of parental-child feeding practices among children at the outpatient clinical setting is scarce. The findings in this study can report parental-child feeding practices by a broad range of environmental factors including child characteristics and familial. This study measures all participants for socio-

demographic, medical history, anthropometry, dietary intakes assessment and household environment.

Moreover, this study can generate new knowledge on parental-child feeding practices and may answer current controversies on factors associated with parental feeding practices among children. As for dietitians and nutritionist, the result of this study can help to improve current practices in implementing the nutrition care process and delivering dietary and lifestyle awareness to the patient, their parents and family in improving the children overall health status. As a whole, it is crucial to carry out this study because research in the area of parental-child feeding practices among pediatric outpatient is new and limited in Malaysia which can be used as control data for the future research.

1.4 Objectives

General Objectives

To determine the factor associated with parental-child feeding practices among children attending outpatient clinics.

Specific Objectives

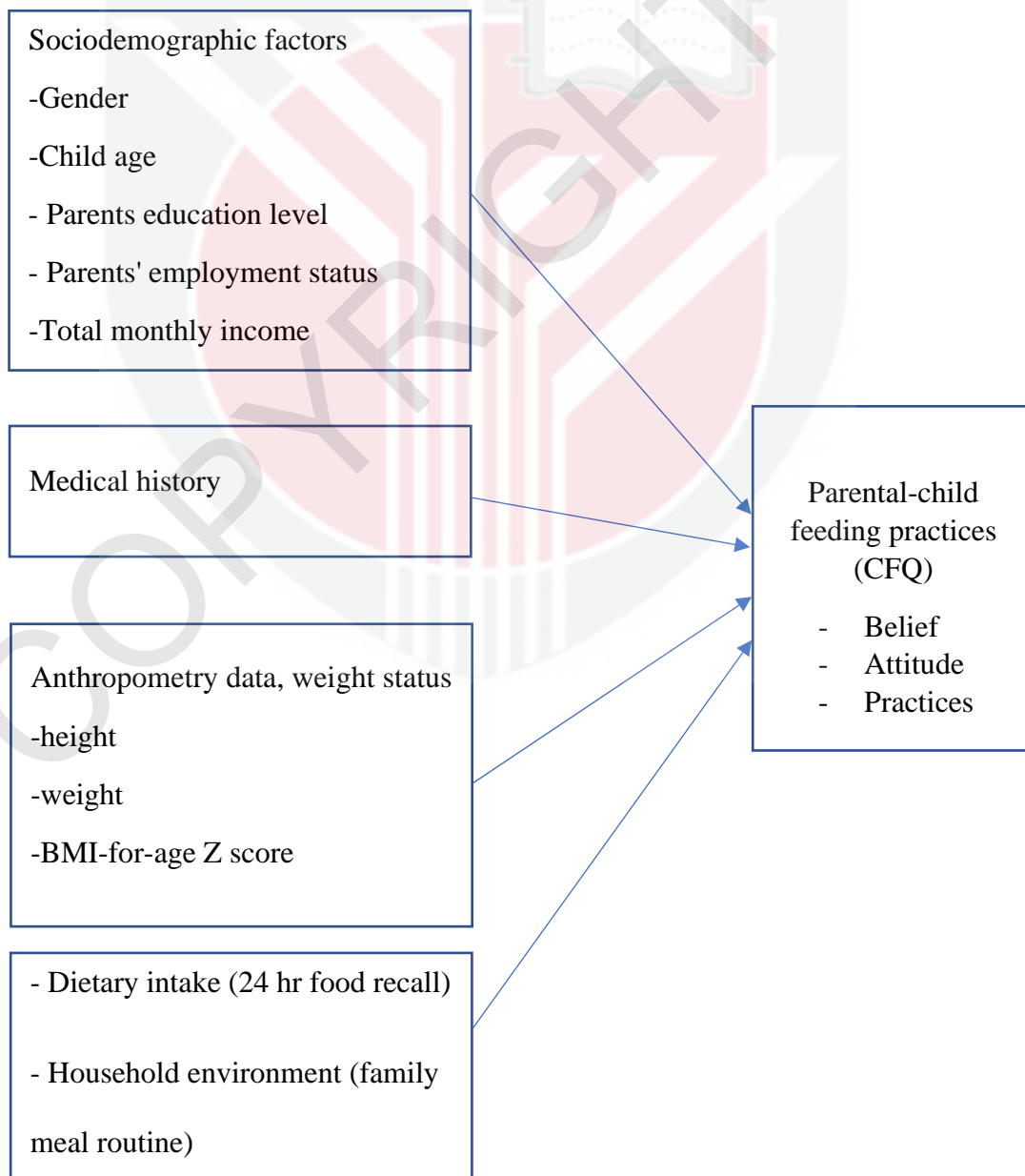
1. To determine parental-child feeding practices among paediatric outpatient.
2. To determine sociodemographic factors (age, gender, date of birth of child, parents' employment status and total monthly income) medical history, weight status, dietary intake and household environment of children in outpatient clinic.

3. To observe the association between sociodemographic factors, medical history, weight status, dietary intake and household environment with parental-child feeding practices in paediatric outpatient.

1.5 Hypothesis

There are association between sociodemographic factors, medical history, weight status, dietary intake and household environment with parental-child feeding practices in paediatric outpatient.

Figure 1.6: Conceptual Framework



CHAPTER 2

LITERATURE REVIEW

2.1 Parental child-feeding practices

Parental child feeding practices are a specific behaviors or techniques that parents apply to maintain or adjust their children's nutritional intake (Hughes et al., 2013). The use of parental control such as parental limitation to unhealthy foods or parental pressure to consume certain types of foods is one of the most frequently investigated parental feeding practices. (Collins et al., 2014). Another control related practices that refer to allowing children's to make their own decisions about healthy or unhealthy food choices and leaving the control to the child is permission. (Musher-Eizenman & Holub, 2007). Parents might start using permissive practices as a return to their children's rejection of healthy food such as vegetables and giving the child a degree of autonomy and control over their own eating habits (Holley et al., 2018).

It has previously been observed by Vollmer and Mobley (2013) that parental permissiveness parental practices was related to higher body mass in children. However, a number of studies has shown that there are no association between these control based parental feeding practices with the indicators of children's weight status (Wardle & Carnell, 2007). Some researchers from previous study had revealed that parental feeding practices play a crucial role in the growth of child eating habits, nutrition, taste preference and weight status (Mais et al., 2017). It was found that here was various assessment method for Parental child-feeding practice.

2.2 Socio-demographic factors

2.2.1 Gender

Feeding styles were determined by the children's gender (Lipowska et al., 2018). Parents are more concerned regarding their daughters weight and eating habits than their sons, which is most likely due to their understanding of the relevance of social norms of physical attractiveness (Cardona & Mata, 2013). Parents are more concerned about their daughters' weight and eating habits than their sons, which is most likely due to their understanding of the relevance of social norms of physical attractiveness. Children tend to gain more weight when the parents restrict their dietary intake and boys tend to gain less weight when the parents urges them to increase their food intake due to controlling feeding practices (Tschann et al., 2015). In addition, the relationship between parents perception of children's body weight, pressure to eat were modified by children's gender. (Loth et al., 2021).

2.2.2 Parents education level

Parental education would have an impact on parenting techniques; for example, parents born in Sweden with a high education level would be less likely to report restrictive feeding practices. There is a well-established association between parental education (a common proxy for socioeconomic level) and childhood obesity (Nowicka et al., 2014). In addition, it was found that in all age groups, higher maternal education was linked to less eating pressure; however, it was not linked to child control in toddlers but was in pre-schoolers (Russell et al., 2018).

2.2.3 Child age

The child age was shown to had a significant impact which is consistent with earlier research showing that parents are more actively involved in feeding younger children. (Wolstenholme et al., 2019). It is well established from a variety of

studies, that parental feeding practices and child eating has more focused on young children (Melbye et al., 2011). Adolescent is the period from the age of eleven to late teens years. It indicates a period of transition between childhood and adulthood.

It is a time of developing

independence when individuals want to make their own decisions, and it is defined by the elaboration of their own identity including when and what to eat (Boutelle et al., 2001). This is the stage where there was gradual shift from parental to own peer influence. Child who gets older was negatively associated with parental restrictive feeding practices as they have less control over the child's intake. (Gray et al., 2010).

2.2.4 Parents' employment status

Recent evidence suggests that children with high weight status have correlation with high prevalence of working mothers (McLaren et al., 2012). The average of working mothers is 37 hour per week (Reports, 2010). In 2016 close to 66% of married mothers were employed and about 71% of single mothers were employed (Bureau of Labor Statistics, 2021). While in Malaysia, the overall female employment is lower when compared with male due to the absence of adequate skills and competing demands of the household are mostly to cause. Woman's participation in the work force is forming dual-career families are becoming more common, and this has had a significant impact on family life (Zaimah et al., 2013). It has previously been observed that more maternal work hours are thought to contribute to less possibilities to monitor a child's nutritional intake or participate in food shopping and preparation (Swyden et al., 2017). For example, longer working hours and outside home may lead to their children's higher intake of fast

convenience foods and snacks which has been linked to childhood weight status (Swyden et al., 2017). In comparison to mothers who stay at home, handling responsibilities at work and at home may cause more stress for mothers who work outside the home. This may cause the subsequent use of various types parental feeding practices and less healthy food choices among children. Moreover, restriction may also be used by parents who are concerned about their child weight status in an attempt to avoid weight gain by limiting high fat/high sugar foods (Mailey & McAuley, 2014). It was predicted that mothers of school children would employ more restrictive feeding practices as a result of longer working hours, maternal stress, and concerns about their children's weight (Swyden et al., 2017).

2.2.5 Household monthly income

The previous research on parental child feeding practices found that family background such as household income and family size were associated with feeding practices. Although parental participation in child and adolescent feeding may have an impact on self-regulation and eating behavior development, they also suggested that child nutritional status could impact feeding practices. (Guo et al., 2012). In low-income household, parental concerns about their children weight status were higher than in high-income households. This is in line with data from other developing Asian countries, but it differs with findings from developed countries, where high weight status is strongly linked to lower socioeconomic categories (Guo et al., 2012). The majority of studies found that in high-income countries, children with lower BMI or weight gain were associated with parental responsive feedings. Data from previous study found that around 40% of family reported monthly income of less than RM2500 which is (equivalent to USD583), followed by (33.1%) families that earned between

RM2501 and RM5000 (equivalent to USD1165) and (27.5%) families earned above RM5000 (Yang et al., 2018). In the year 2012, the average monthly net household income for Malay ethnicity was RM4457 (Department of statistics Malaysia, 2010). In the context of this developing country, these results show that the majority of the sample was from lower to middle income classes (Yang et al., 2018). However, in 2020 the median of monthly net household income was RM5209 decrease compared to the year 2019 due the impact from the Covid-19 outbreak (Department of statistics Malaysia, 2021). Previous research has shown that in low-income households compared to high-income households, there were more parental concerns about the risk of childhood obesity (Yang et al., 2018).

2.3 Medical history

There was insufficient study on medical history with parental child feeding practices. However, A study has established that the existence of a disease is a very important but it is not the only determinant factors that affects parental feeding practices behavior. The study intended to record parental child feeding practices in handling kids with typical development and gastrointestinal diseases (Sdravou et al., 2020) . This study categorized disease into 5 categories which are infectious, respiratory, neurologic, gastrointestinal and others.

2.4 Anthropometry

Recent research has shown that BMI was found to be linked with parental feeding practices. Higher parental control and coercion were associated with decrease child BMI in a study. Previous research has shown varying findings, with most cross-sectional studies suggesting that parental pressure to eat is linked to a low child BMI

(Shloim et al., 2015). Children's body mass was positively correlated with parental restriction to unhealthy food (Cardel et al., 2012). It has been confirmed in more than 10 cross-sectional studies that parental permissiveness was related to higher body mass in children (Vollmer & Mobley, 2013). It also has been explored that parental feeding practices may be the response to parental recognition of the children weight status rather than as the proactive strategy (Liszewska et al., 2018). Previous research suggested that parents who believe their child is overweight or concern about their child weight are more likely to be controlling in food related parental practices such as food restriction compared to parents who are not concerned about the children's weight. For instance, parents might impose limit of the amount of sweets consumed by their children. (Loth et al., 2021). However, Studies that linking children's body mass with parental practices are usually a cross sectional design. Hence, it remains unclear whether parental feeding practices leading or a consequences of children's body mass (Liszewska et al., 2018).

2.5 Dietary intake

A healthy diet for children is crucial for healthy development and growth for long term health (Schwarzenberg & Georgieff, 2018). A dietary intake that are high in fruits, vegetables, milk, fish and whole grain are highly recommended. However, according to national data, it is difficult for parents to include vegetables and fish in their children's diets (Øverby et al., 2020). In Malaysia, it was reported that the micronutrient and energy intakes of boys were higher compared than girls and micronutrients intakes were similar between both gender (Poh et al., 2013). Children's dietary intake and preferences are determined by the interaction of innate and learnt factors embedded in the context of parent-child interactions. Appetite regulation

mechanism are influenced by parents through the interaction with external factors such as diet composition and parental feeding style. Children observe and reflect their parents' eating habits as well as other components of the family's food environment (Lipowska et al., 2018). Mothers have a higher influence on the development of their children's dietary habits since they are more involved in food-related decisions and meal preparation.

Children's preferences with the type of food consume is the responsible of their mothers such as the unhealthy food preferences of consuming sweets, fast foods and the availability of these unhealthy foods at home (Russell et al., 2018). Additionally, Overweight mothers were also more likely to encourage their children despite of gender to try a variety of foods as this feeding practices acts as an approach to expose different types of nutrients, taste and texture that may resulting in a preference for healthier meals. However, overweight fathers is reported less control over their children's food intake which may due to lower control of their own eating habits (Kosakowska-Berezecka et al., 2016). Previous study reported that children that have limited exposure to variety types of foods may contributed to unhealthy eating and at early age and they tend to prefer energy dense food, sweet and salty tastes over meals that have better nutritional value (Lipowska et al., 2018).

2.6 Home environment (Family meals)

Over the last decade, a series of studies has suggested that eating together as a family on a regular basis may help to improve children's weight status (Fulkerson et al., 2014). The previous meta-analysis shown that children aged three to seventeen years old who shared a meal with their family three or more times a week had a lower

risk of being overweight and had healthier dietary and eating habits. This shows that family meals may play an essential role in encouraging children's to eat healthily (Verhage et al., 2018).

A number of studies have shown that family meals are linked to a variety of physical and mental health benefits in preschool and school-aged children. Higher intake of healthful foods such as vegetables, fruit, iron and calcium were linked to more frequent family meals. It was also found that children had healthier BMI when they had more frequent family meals which may be associate with parental control during meal time and a structured meal time routine. In addition to this, adolescent who shared at least five family meals a week had high family support, self-esteem, better language and academic development due to family talk and debate during family meals (Martin-Biggers et al., 2014). Previous research has shown that positive parental feeding practices was associated with family meals daily which include variety, balance, home environment and modelling. While Having fewer family meals was linked to the use of negative feeding habits such as weight restriction and pressure. Therefore, promoting family meals and positive feeding practices should be a priority from a young age (Øverby et al., 2020)

CHAPTER 3

METHODOLOGY

3.1 Study Design

This study was a cross-sectional study aiming to investigate the associations of sociodemographic, medical history, anthropometric data, dietary intake and household environment with parental-child feeding practices among paediatric outpatients in HPUPM.

3.2 Study population

The study population was the paediatric outpatients in HPUPM. The respondents for this research were the parents (father or mother) or the caregivers which are someone that gives care, support and help with activities such as daily living of the paediatric outpatients attending the outpatient clinic in HPUPM. The study population were selected based on the inclusion and exclusion criteria as in diagram below. The questionnaire was answered by the parents or caregiver of patient since paediatric population are unable to answer the self-administered questionnaire by themselves.

3.3 Study location

The study was conducted at Hospital Pengajar Universiti Putra Malaysia (HPUPM). HPUPM is a teaching hospital for training students from Faculty of Medicine and Health Sciences (FHMS) of UPM. Department of paediatrics of HPUPM consists of outpatient and inpatient specialist. The department in HPUPM includes 19 departments which are family medicine, medical specialist, neurology,

otorhinolaryngology, head and neck surgery (ENT), surgery, urology, ophthalmology, anaesthesiology and intensive care, paediatric, orthopedics, rehabilitation medicine, radiology, obstetrics and gynaecology, psychiatry, pharmacy, dietetics, nuclear imaging, medical microbiology, pathology. The tertiary care includes Allergy and Clinical Immunology, Endocrinology, Infectious Disease, Neonatology, Cardiology and Intensive Care. HPUPM is located at Serdang, Selangor which is 13 km from Kuala Lumpur, the capital city of Malaysia and the location of this hospital is near to Putrajaya and Cyberjaya province.

3.4 Subject criteria

Table 3.1: Inclusion and exclusion criteria of the study subjects

Inclusion Criteria	Exclusion Criteria
a) Children attended outpatient departments in HPUPM b) Aged 2- 12 years old	a) Parents who were not able to give informed consent b) Children with active malignancy during the period of data collection

3.5 Sample size determination

The methods used to determine sample size in the correlation study are as follows (Rosenbaum, 2021).

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

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

Where N= number of respondents needed

The standard normal deviate for $\alpha = Z_{\alpha} = 1.96$

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

The expected correlation coefficient = r

Table 3.2: Calculation of sample size

Independent variables	Correlation, r	Sample size, n
Parental-child feeding practices and BMI (Firouzi et al., 2014)	0.27	$C = 0.5 \times \ln[(1+r)/(1-r)]$ $= 0.2769$ $N = [(Z_{\alpha}+Z_{\beta})/C]^2 + 3$ $= 105$
Parental-child feeding practices and age (Yang et al., 2018)	0.45	$C = 0.5 \times \ln[(1+r)/(1-r)]$ $= 0.4847$ $N = [(Z_{\alpha}+Z_{\beta})/C]^2 + 3 = 36$
Parental-child feeding practices and family meal frequency (Melbye et al., 2013)	0.41	$C = 0.5 \times \ln[(1+r)/(1-r)]$ $= 0.4356$ $N = [(Z_{\alpha}+Z_{\beta})/C]^2 + 3 = 44$

Based on the calculation in Table 1, the highest calculated sample size is 105. An additional 5% was added to consider the possibility of a non-response rate. Therefore, the appropriate sample size for this study was 110 respondents.

3.6 Sampling design

The non-probability sampling method was used as sampling design in this study.

Purposive sampling will be applied to select respondents from all

paediatric outpatient parents or caregivers attending HPUPM. The list of departments is collected from the HPUPM system to identify paediatric outpatients registered. This study includes paediatric outpatients from 2 departments in HPUPM which are department of paediatrics and dietetics. All paediatric outpatients that meet the inclusion criteria are invited to participate in this study. However, this study excludes patients in neonatology unit because they are not meeting the study aged group (2-14 years old).

3.7 Measures

The measurements that were used in this study are self-administered questionnaires which includes the information on parental-child feeding practices, dietary intake, home environment and socio-demographic (gender, age, parental age, parent employment status and total monthly income), medical history and anthropometry (weight status). These study instruments will be discussed in the following section.

3.7.1 Sociodemographic characteristics

Sociodemographic characteristics of the respondents include children gender, age, parent education level, parent employment status and total household income. Besides, questions on dietitian referrals; referred to dietitian or not and type of cases; follow up or new cases were assessed for the descriptive analysis. The contact number of respondents was obtained to send the link of questionnaire (Refer Appendix A).

3.7.2 Medical history

The medical condition of respondents was acquired from the hospital medical records. Then, the individual medical condition was categorized into 5 categories which are infectious, respiratory, gastrointestinal, neurologic and others (Refer Appendix A).

3.7.3 Anthropometric

All anthropometric measurement was obtained from the self- reported height and weight that was measured by respondents at home or at the clinics on the day of data collection. Standing height was measured using a wall-mounted stadiometer to the nearest 0.1 cm. The children weight was measured to the nearest 0.1 kg using a digital weighing scale according to standard protocol. Body mass index (BMI, kg/m^2) was calculated by dividing weight (kg) by the square height (m). The BMI-for -age Z- score (sex and age specific) were generated by using the World Health Organization (WHO) AnthroPlus Software version 3.2.2 (Switzerland,2007) and the sex and age specific growth charts was used to determine the nutritional status of the paediatrics.

3.7.4 Dietary intake

Dietary intake of the paediatrics was obtained by performing 24-hour dietary recall of one weekday with the parents or caregivers. The individual mean daily nutrient intakes were analyzed using Nutritionist Pro™ Diet Analysis (Axxya Systems, Washington, United States of America) year 2022, version 2.4.1 by referring to two food composition databases from Malaysian Food Composition Database Programme (1997) and Singapore Energy and Nutrient Composition of Food (2011). The total

energy and protein intake values were compared with the age relevant Recommended Nutrient Intakes (RNI) for Malaysia (Ministry of Health Malaysia, 2005) while the number of servings for each food groups were compared to recommendations in the Malaysian Dietary Guidelines (MDG) (Moh, 2013) (Refer Appendix A).

3.7.5 Home environment (Family meal routine)

A five-item scale derived from the Family Ritual Questionnaire dinnertime scale was used to assess family mealtime routine (Fiese & Kline, 1993). The child's parents are asked to answer the following questions regarding their family's mealtimes which are (1) "In our family, mealtime is planned in advance" (2) "Our family regularly eats the main meal together" (3) "In our family, everyone is expected to be home for the main meal" (4) "In our family, everyone has a specific role or job to do" (5) "In our family, mealtime is flexible, people eat whenever they want". The questions are using a 1 to 5-point Likert scale (1= not true at all and 5= "very true"). The five-item scale had a Cronbach's alpha of 0.753 and a higher score on the scale indicates higher mealtime climate with the family mealtime routine. The median score of the family mealtime routine scale was 3.83. Those who with scores at or above the median, while lower family routine was labelled as those with scores below the median (Refer Appendix A).

3.7.6 Parental-child feeding practices

The Child Feeding Practices (CFP) has been applied in many settings and it was cross-validated using various parental samples. It examined parents beliefs, attitudes and practices towards child feeding with a focus on obesity risk in children aged 2-12

years old. (Birch et al., 2001). The concept of domain model for parenting suggested that parents are most likely to exert control in child feeding when they are very interested in child feeding and/or feel there are child weight difficulties (Costanzo, P. R. & Woody, 1985). The mother or if unavailable, the father will complete the 31-item validated CFPQ in either English language or Malay language based on their preference. The CFPQ is consisted of seven domains with four of the domains measuring the aspects of parents concerns and perception regarding their child possibility for obesity which are Perceived feeding responsibility (PFR), perceived parent over- weight (PPO), perceived child overweight (PCO) and concerns about child overweight (CCO). Three other domains assess parent's use of controlling feeding practices which are restriction (REST), pressure to eat (PTE) and Monitoring (MONI). A 5 point Likert scale contained feasible responses ranging from 'disagree' (coded as 1) to 'agree' (coded as 5) or 'never' (coded as 1) to 'always' (coded as 5) depending on the domain and the scoring was based on the average items under each different subscale. (Birch et al., 2001). The higher the score under each subscale, high likely the belief, attitude and feeding practices (Refer Appendix A).

3.8 Ethical approval

Before the study was conducted, ethical approval was obtained from the Ethics Committee for Research Involving Subjects, Universiti Putra Malaysia JKEUPM-2021-892 (Refer Appendix C) and permission from Clinical Research Centre (CRC) Hospital Pengajar Universiti Putra Malaysia (HPUPM) (Refer Appendix D).

3.9 Pre-Testing

A pre-testing was conducted among 5% of the total sample size which is 10 respondents. All respondents of pre-testing answered the questionnaire and their responses are excluded in the actual data collection. The purpose of conducting the pre-testing is to identify all the problems and errors prior to the implementation of the 24-hour diet recall and self-administered questionnaires. Besides, during the pre-testing, the time taken was recorded for the respondents to answer the questionnaire and for the researcher to complete the interview on 24-hour diet recall. Overall respondent's feedback was collected and the questionnaire was improvised accordingly before conducting the actual data collection.

3.10 Procedures

Upon the approval from the ethics review board Ethics Committee for Research Involving Human Subject (JKEUPM) and permission from Clinical Research Centre (CRC) Hospital Pengajar Universiti Putra Malaysia (HPUPM), the details of the study were explained to potential respondents who meet the study criteria. Anonymity and confidentiality were assured before the respondents written informed consent is obtained.

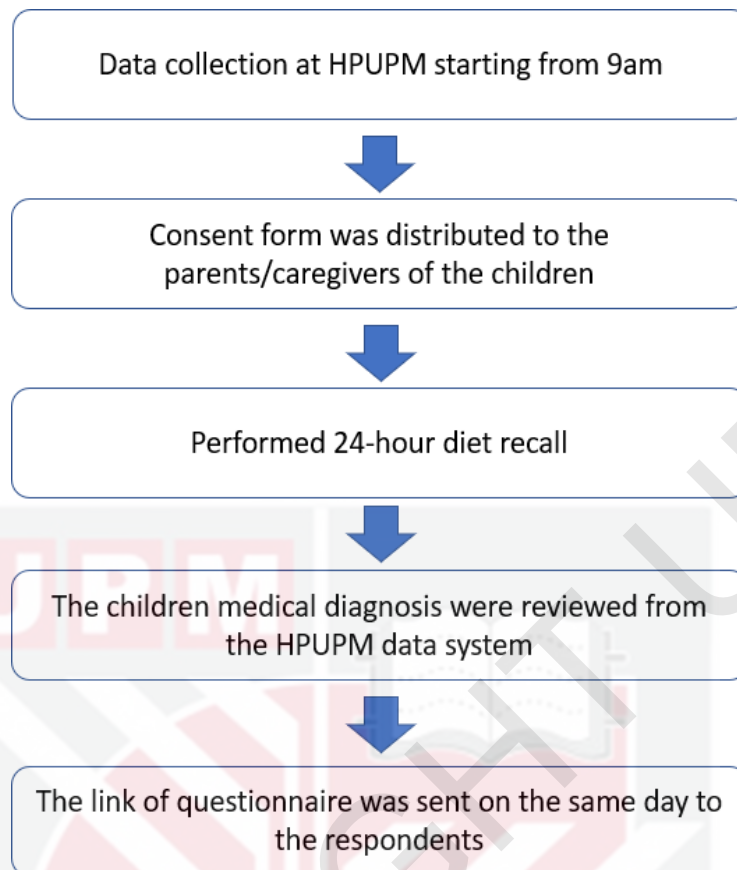


Figure 3.1: Flow chart of the data collection

3.11 Statistical analysis

All data collected was analysed using IBM SPSS Statistic Version 26 with the significance level is set at $p < 0.05$ with a 95% Confidence Interval and a 5% margin of error. All data were normally distributed based on the normality test.

Study variables was analysed using several tests. Descriptive statistic is use to summarize and organize the characteristic of data set which consist of socioeconomic factor (children's age, gender, BMI for-age-z-score monthly family income and parent's employment status), food environment (family meal) and parental-child feeding practices. Inferential statistics which is Pearson Correlation Coefficient was used to test the hypotheses and measure the strength of linear association between the

socioeconomic factor child age, BMI for-age-z-score and dietary intake with parental-child feeding practices among paediatric outpatients in HPUPM.



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CHAPTER 4

RESULTS AND DISCUSSION

4.1 Response rate

During the data collection, 115 respondents were approached; however, for this study 75 respondents met the criteria requirements, 61 completed the questionnaire responses and 14 respondents refused to participate. Hence, the response rate for this study was 81%.

4.2 Sociodemographic characteristics

Table 4.1 and table 4.2 shows the socio-demography of the children. Of the 61 families who participated, about 91.8% (56) of the children were Malays, followed by Chinese and Indians 6.5% (4). The majority of children's age range were toddlers aged 2 to 3 years old 39.3% (24), followed by preschools aged 4 to 7 years old 31.1% (19) and children aged 8 to 14 years old 29.5% (18). More than half of the children were boys 52.5% (32) and girls 47.4% (29).

While for the parents/caregiver information, about 93.4% (57) were females with employment status 77% (47) were employed and 23% (14) were unemployed. A total of 72.1% (44) reported a family monthly income of M40 ranging from RM 4850- RM 10,959 and above. Based on the 2019 Household Income and Basic Amenities (HIS/BA) survey from the Department of Statistics (DOSM), the average monthly income in Malaysia is RM7,901. In terms of the parents/caregiver education level, 90.2% (55) had tertiary level education and 9.8% (6) had secondary education. Most of them 98.4% (60) were currently married.

Table 4.1: Socio-demography of children (n=61)

Variables	n (%)	Mean ± S.D.
Age (years old)		5.70 ± 3.58
Toddlers	24 (39.3)	
Preschools	19 (31.1)	
Children	18 (29.5)	
Gender		
Boy	32 (52.5)	
Girl	29 (47.5)	
Ethnicity		
Malay	56 (91.8)	
Others	4 (6.5)	

Toddlers= 1-3 years old, preschool= 4-7 years old, children= 8-14 years old, adolescent= 15-18 years old

Table 4.2: Parents/ caregiver information (n=61)

Variables	n (%)
Gender	
Male	4 (6.6)
Female	57 (93.4)
Employment status	
Employed	47 (77)
Unemployed	14 (23)
Household income	
B40	17 (28.3)
M40 and above	44 (72.1)
Education	
Secondary	6 (9.8)
Tertiary	55 (90.2)

Marital status

Currently married	60 (98.4)
Divorced	1 (1.6)

B40= ≤ RM 4849

M40 and others= ≥ RM 4850- RM 10,959

4.3 Anthropometry data

The anthropometry data of the children is presented in Table 4.3. The mean and SD of the children's BMI for age-z score is 58.63 ± 33.00 . Based on WHO 2007, the Child Growth Standards provide Z-score-based child growth measurements that are standardized by sex and age. Since Malaysia is an Asian developing country where a third of urban school-aged children are overweight or obese (Poh et al., 2013), this study found that not majority of the children had an overweight BMI-for-age z score of 24.6% (15), small proportion of the children was underweight 23% (14) and most of the children was normal 52.5% (32). The result was similar to the previous study that more than half percent of children had a normal BMI for age z-score (Lee et al.,2018).

Table 4.3: Anthropometry data of children (n=61)

Variables	n (%)	Mean \pm S.D.
BMI for age- z score		58.63 \pm 33.00
Underweight	14 (23.0)	
Normal	32 (52.5)	
Overweight	15 (24.5)	

BMI: Body Mass Index

4.4 Medical history

As shown in Table 4.4, the highest group of the medical condition among the children was others 78.7% (48) which mostly speech delay, allergies and eczema with a small percentage 1.6% (1) of them had Congenital malformations, deformations, gastrointestinal and neurological conditions 3.3% (2) respectively and respiratory problems 13.1% (8). The majority of the children did not refer to a dietitian 78.7% (48) and 21.3% (13) have been referred to a dietitian. While 38.5% (5) of that is a new case and 61.5% (8) is a follow-up case.

Table 4.4: Medical history of children (n=61)

Variables	n (%)
Gastrointestinal	2 (3.3)
Neurological	2 (3.3)
Respiratory	8 (13.1)
Congenital malformations, deformations	1 (1.6)
Others	48 (78.7)
Referred to dietitian	
Yes	13 (21.3)
No	48 (78.7)
Case	
New case	5 (38.5)
Follow up case	8 (61.5)

4.5 Dietary intake and family meal routine factors

The data on the dietary intake and family meal routine were tabulated in Table 4.5. The mean and SD values for total energy intake were 1397.59 ± 665.22 kcal and 87.3 ± 58.15 kcal for half of the children achieved the total energy requirements 52.5% (32) and 47.5% (29) did not achieve the requirements. The mean values for total protein intakes among the children are 57.40 ± 30.27 g. The majority of the children 93.4% (57) achieved or exceeded the total protein and 6.6% did not achieve the total protein requirements based on the Recommended Nutrient Intake (RNI) for Malaysia 2017. The mean and SD values of the family meal routine are 17.33 ± 2.839 .

Table 4.5: Dietary intake (24-hour dietary recall) (n=61)

Variables	n (%)	Mean \pm S.D.
Total energy (kcal)		1397.59 ± 665.22
Energy (kcal/kg)		87.3 ± 58.15
Achieved RNI	32 (52.5)	
Not achieved RNI	29 (47.5)	
Total protein (g)		57.40 ± 30.27
Protein (g/kg)		3.51 ± 2.09
Achieved RNI	57 (93.4)	
Not achieved RNI	4 (6.6)	
Family meal routine		17.33 ± 2.84

RNI: Recommended Nutrient Intake

4.6 Parental-Child Feeding Practices

The parental-child feeding practices of the children were presented in Table 4.6. The highest score of the three domains is practices which include subdomains restriction, pressure to eat and monitoring 12 ± 1.7 which indicated that most of the parents restrict their children food intake, pressure their children to eat and tends to

monitor the poor dietary intake. Followed by beliefs which includes perceived responsibility, parental perceived weight and perceived child weight 9.5 ± 1.2 and the lowest mean were attitude including the subdomains parents' concern about the child's weight 3.3 ± 1.0 . Higher scores show more active participation in child feeding practices, whereas lower scores show less active participation. The current findings were contrasting with the previous study in which attitude scored the highest mean (parents' concern about child weight), followed by practices (monitoring and pressure to eat). The difference in the current findings was probably because the parents from the past study are more likely to watch their children's food intake, be concerned about their risk of becoming overweight, and pressure their kids and teenagers to eat more (Yang et al.,2017). The higher the score under each subscale, high likely the belief, attitude and feeding practices (Birch et al., 2001).

Table 4.6: Parental-child feeding practices (n=61)

Variables	Mean \pm S.D.	Range
Beliefs	9.5 ± 1.2	6.0-12
Perceived responsibility	4.1 ± 2.5	2.0-5.0
Parental perceived weight	3.2 ± 0.4	2.0-4.0
Perceived child weight	2.3 ± 0.8	0.8-4.0
Attitude		
Parents concern about child weight	3.3 ± 1.0	1.0-5.0
Practices	12 ± 1.7	7.5-14
Restriction	3.8 ± 0.7	2.5-4.9
Pressure to eat	3.9 ± 0.8	1.5-5.0
Monitoring	3.8 ± 0.9	2.0-5.0

4.7 Association between socio demographic and Parental-Child feeding Practices

The relationship between the socio-demography such as children age with parental child feeding practices was determined. As shown in Table 4.7, there were no significant associations between children's age with beliefs, attitude and practices domain in parental child feeding practices. The reason might be because the children weight status did not influence the parents feeding practices as they feed them based on their children preferences. The findings contradicted with the previous study where there were positive and significantly associated between the beliefs, parental child weight and children's age $r=0.45$, $p<0.001$ (Yang et al.,2017). Similar to studies on children of European heritage, decreasing kid BMI-for-age percentiles in the US were associated with eating pressure under the practice domain (Cardel et al., 2012). Children's age was found to be a significant predictor to parental perception of their children's risk of childhood obesity. A study in older children from a British population, however, indicated decreasing levels of parental controlling feeding practices in their children aged between 7 and 11 years. Specifically, in two longitudinal studies in where there were no prospective effects between restrictive feeding practices on children aged 5 to 11 years old.

Table 4.7: Association between Socio-demography and Parental child feeding practices (n=61)

Variables	Parental-child feeding practices					
	Beliefs		Attitude		Practices	
	<i>r</i>	<i>p-value</i>	<i>r</i>	<i>p-value</i>	<i>r</i>	<i>p-value</i>
Child age (years)	0.012	0.926	0.193	0.137	0.108	0.407

4.8 Association between anthropometry and Parental child feeding practices

As shown in Table 4.8, there were a weak, positive correlation between BMI for-age-z-score and beliefs, attitude, practices which are not significant ($r=0.162$, $p=0.212$), ($r=0.120$, $p=0.355$), ($r=0.087$, $p=0.504$) respectively. Previous research has established that children's excess body weight is correlated with their parent's restriction of food and children's poor weight status is typically correlated with pressure to eat. Mothers frequently underestimate their kids' weight status, especially when it comes to younger kids and they would apply practices to increase body weight even in normal children's body weight (Costarelli et al., 2021). The previous study found that there is no correlation between Practices and BMI for-age z-score ($r=0.050$, $p=0.701$) consistent to the previous study that restrictive feeding practices showed no correlation on a child aged 5-11 years old (Eichler et al., 2019). These major findings shows that parents are concerned about their children's weight and that the control of children eating involving pressure to eat and monitoring was high (Yang et al., 2018). There is a high tendency that parents perceived overweight status as their children grow older. Studies in children from European descent have reported that pressure to eat was correlated with decreased child BMI-for-age percentiles in the United States (Faith & Hittner, 2010). In addition, it is also crucial to note that due to the previous cross sectional design study, there was limited conclusion whether parental child feeding practices could be the consequences or the cause of child BMI (Eichler et al., 2019).

Table 4.8: Association between Anthropometry and Parental child feeding practices (n=61)

Variables	Parental-child feeding practices					
	Beliefs		Attitude		Practices	
	<i>r</i>	<i>p-value</i>	<i>r</i>	<i>p-value</i>	<i>r</i>	<i>p-value</i>
BMI for-age z-score	0.162	0.212	0.120	0.355	0.087	0.504

4.9 Association between dietary intake and Parental child feeding practices

As shown in Table 11, there were weak, positive correlation and not significantly associated between total energy intake with parental child feeding practices domains beliefs, attitude and practices ($r=0.103$, $p=0.207$), ($r=0.088$, $p=0.501$), ($r=0.207$, $p=0.109$) respectively. There is no significant association between total protein intake with parental child feeding practices Beliefs, Attitudes and Practices. The total energy and total protein were discovered differ significantly between each of the parental child feeding practices domains. The lack of associations findings in this study is probably because of limited to small populations. Similar with the previous study which the domains Practices (restriction and pressure to eat) demonstrated no significant association with the children dietary intake (Pandey et al., 2019). This is proved by the evidence that most of the children in this study achieved or exceeded the RNI for protein. Furthermore, it has previously been observed that for reported daily energy consumption, there were significant gender differences. As an outcome of more girls than boys reporting higher energy consumption than their estimated energy requirements ($p<0.05$) (Yang et al., 2018). Previous research has established that child feeding Beliefs and Practices as the parents control their children's eating behaviours have an impact on how they learn to regulate their energy intake and satiety cues (Lee

et al.,2014). Due to high concern related to health risks, parents were probably exerting control over eating which is consistent with restriction practices that cause the children to overeat and lead to excessive energy intake.

Table 4.9: Association between dietary intake and parental child feeding practices (n=61)

Variables	Parental-child feeding practices					
	Beliefs		Attitude		Practices	
	<i>r</i>	<i>p-value</i>	<i>r</i>	<i>p-value</i>	<i>r</i>	<i>p-value</i>
Total energy intake (g)	0.103	0.431	0.088	0.501	0.207	0.109
Energy intake (kcal/kg BW)	0.038	0.772	0.110	0.401	0.153	0.240
Total protein intake (g)	0.047	0.719	0.061	0.638	0.094	0.469
Protein intake (g/kg BW)	0.240	0.063	0.098	0.451	0.046	0.725

*Pearson correlation is significant at $p < 0.05$

CHAPTER 5

CONCLUSION, STRENGTHS, LIMITATIONS AND RECOMMENDATIONS

5.1 Conclusion

In conclusion, there were no association significant association between sociodemographic, anthropometric and dietary intake with parental-child feeding practices. Parental feeding practices are ingrained in their own feeding styles and may differ based on parental perceptions and concerns of children's risk for acquiring a problem in the food domain which includes weight status. This condition may also differ within the parents and same family, from child to child. This study found that about half 52.5% of the children had normal BMI-for-age z score. However, other proportion of the children were overweight 24.6% and underweight 23% which shows a significant dual burden. This is because mothers frequently underestimate their children weight status, especially when it comes to younger kids and they would apply practices to increase body weight even in normal children's body weight and conversely. Therefore, they play an important role in the development of their children eating behaviour and the subsequent weight status.

5.2 Strengths

The findings in this study were able to assess the socio-demographic, medical history, anthropometry, dietary intake assessment and household environment of the pediatric outpatients in HPUPM. By conducting this study, new knowledge regarding factors associated with the parental-child feeding practices among paediatric outpatients are obtained which may help improve current practices in implementing the nutrition care process and delivering dietary and lifestyle awareness to the patient,

their parents and family in improving the children overall health status. Further study is needed to determine the feeding practices of parents and children may have an effect on the nutritional condition of children in Malaysia. In addition, parents should also become exemplary role models and apply optimal feeding practices to their children because parents have a crucial influence on food choice as they influence the availability of food at home.

5.3 Limitations

There are several limitations that need to be considered in this study. Firstly, this study had a small sample size and did not achieve the calculated sample size compared to the previous study due to limited time for data collection. Besides, the study location is also the limitation as it was conducted at Hospital Pengajar Universiti Putra Malaysia (HPUPM) only, thus it was not generalized to all study populations. In addition, there was potential bias due to self-administered questionnaire that measures socio-demography, anthropometry, parental child feeding practices and home environment family meals. This study was also challenging to obtain the respondents' consent and ensuring that they finish answering the questionnaires since it is quite lengthy. To minimize it, find the shortest version of questionnaires and provide a simple set of answers. Lastly, as the dietary recall relied on memories, some of the mothers or caregivers, had difficulty in estimating the portion sizes of the food and beverages consumed by the children which may cause overestimation or underestimation of portion sizes.

5.4 Recommendations

Future studies are recommended to use a larger sample size to increase the validity of the data. To obtain generalize result, it is crucial to include different background and types of respondent populations. In addition, using secondary data from the medical records may assist in gaining anthropometry data such as weight, height and BMI that are more accurate and reliable. Besides, other suggestion is to simplify data collection for questionnaire and prepare household measurements tools when conducting the 24-hour diet record. Last but not least, more research regarding parental child feeding practices, particularly in Malaysia are recommended as more factors such as parental weight status and picky eating behaviour associated with it can be explored.

References

- Birch, L. L., Fisher, J. O., Grimm-Thomas, K., Markey, C. N., Sawyer, R., & Johnson, S. L. (2001). Confirmatory factor analysis of the Child Feeding Questionnaire: A measure of parental attitudes, beliefs and practices about child feeding and obesity proneness. *Appetite*, *36*(3), 201–210.
<https://doi.org/10.1006/appe.2001.0398>
- Boutelle, K. N., Lytle, L. A., Murray, D. M., Birnbaum, A. S., & Story, M. (2001). Perceptions of the family mealtime environment and adolescent mealtime behavior: Do adults and adolescents agree? *Journal of Nutrition Education and Behavior*, *33*(3), 128–133. [https://doi.org/10.1016/s1499-4046\(06\)60181-4](https://doi.org/10.1016/s1499-4046(06)60181-4)
- Bureau of Labor Statistics. (2021). *Bureau of Labor Statistics Employment Characteristics of Families 2020*. 202, 1–15. www.bls.gov/cps
- Cardel, M., Willig, A. L., Dulin-Keita, A., Casazza, K., Mark Beasley, T., & Fernández, J. R. (2012). *Parental feeding practices and socioeconomic status are associated with child adiposity in a multi-ethnic sample of children*. *Appetite*. <https://doi.org/10.1016/j.appet.2011.11.005>
- Carruth, B. R., Ziegler, P. J., Gordon, A., & Barr, S. I. (2004). Prevalence of picky eaters among infants and toddlers and their caregivers' decisions about offering a new food. *Journal of the American Dietetic Association*, *104*(SUPPL. 1), 57–64. <https://doi.org/10.1016/j.jada.2003.10.024>
- Collins, C., Duncanson, K., & Burrows, T. (2014). A systematic review investigating associations between parenting style and child feeding behaviours. *Journal of Human Nutrition and Dietetics*, *27*(6), 557–568.
<https://doi.org/10.1111/jhn.12192>

- Costanzo, P. R. & Woody, E. Z. (1985). Costanzo1985. *Journal of Social and Clinical Psychology, 1*, 425–445.
- Costarelli, V., Michou, M., Panagiotakos, D. B., & Lionis, C. (2021). Adherence to the Mediterranean diet and weight status in children: the role of parental feeding practices. *International Journal of Food Sciences and Nutrition, 72*(1), 112–122. <https://doi.org/10.1080/09637486.2020.1765151>
- Daniel, M., Kleis, L., & Cemeroglu, A. P. (2008). Etiology of failure to thrive in infants and toddlers referred to a pediatric endocrinology outpatient clinic. *Clinical Pediatrics, 47*(8), 762–765. <https://doi.org/10.1177/0009922808316989>
- Eichler, J., Schmidt, R., Poulain, T., Hiemisch, A., Kiess, W., & Hilbert, A. (2019). Stability, continuity, and bi-directional associations of parental feeding practices and standardized child body mass index in children from 2 to 12 years of age. *Nutrients, 11*(8), 1–17. <https://doi.org/10.3390/nu11081751>
- Faith, M. S., & Hittner, J. B. (2010). Infant temperament and eating style predict change in standardized weight status and obesity risk at 6 years of age. *International Journal of Obesity, 34*(10), 1515–1523. <https://doi.org/10.1038/ijo.2010.156>
- Fiese, B. H., & Kline, C. A. (1993). Development of the Family Ritual Questionnaire: Initial reliability and validation studies. *Journal of Family Psychology, 6*(3), 290–299. <https://doi.org/10.1037//0893-3200.6.3.290>
- Firouzi, S., Poh, B. K., Ismail, N., & Sadeghilar, A. (2014). Sleep habits, food intake, and physical activity lev-els in normal and overweight and obese Malaysian children. *Obesity Research & Clinical Practice, 8*, 70–78. <https://doi.org/10.1016/j.orcp.2012.12.001>

- Fulkerson, J. A., Larson, N., Horning, M., & Neumark-Sztainer, D. (2014). A review of associations between family or shared meal frequency and dietary and weight status outcomes across the lifespan. *Journal of Nutrition Education and Behavior*, *46*(1), 2–19. <https://doi.org/10.1016/j.jneb.2013.07.012>
- Gray, W. N., Janicke, D. M., Wistedt, K. M., & Dumont-Driscoll, M. C. (2010). *Factors associated with parental use of restrictive feeding practices to control their children's food intake*. *Appetite*.
<https://doi.org/10.1016/j.appet.2010.07.005>
- Guo, X., Zheng, L., Li, Y., Yu, S., Sun, G., Yang, H., Zhou, X., Zhang, X., Sun, Z., & Sun, Y. (2012). Differences in lifestyle behaviors, dietary habits, and familial factors among normal-weight, overweight, and obese Chinese children and adolescents. *International Journal of Behavioral Nutrition and Physical Activity*, *9*, 1–9. <https://doi.org/10.1186/1479-5868-9-120>
- Holley, C. E., Haycraft, E., & Farrow, C. (2018). Predicting children's fussiness with vegetables: The role of feeding practices. *Maternal and Child Nutrition*, *14*(1).
<https://doi.org/10.1111/mcn.12442>
- Hughes, S. O., Frankel, L. A., Beltran, A., Hodges, E., Hoerr, S., Lumeng, J., Tovar, A., & Kremers, S. (2013). Food parenting measurement issues: Working group consensus report. *Childhood Obesity*, *9*(SUPPL.1).
<https://doi.org/10.1089/chi.2013.0032>
- Hurley, K. M., Cross, M. B., & Hughes, S. O. (2011). A systematic review of responsive feeding and child obesity in high-income countries. *Journal of Nutrition*, *141*(3), 495–501. <https://doi.org/10.3945/jn.110.130047>
- Kosakowska-Berezecka, N., Korzeniewska, L., & Kaczorowska, M. (2016). Sharing

housework can be healthy: cultural and psychological factors influencing men's involvement in household maintenance. *Health Psychology Report*, 3(3), 189–201. <https://doi.org/10.5114/hpr.2016.62232>

Lipowska, M., Lipowski, M., Jurek, P., Jankowska, A. M., & Pawlicka, P. (2018). Gender and body-fat status as predictors of parental feeding styles and children's nutritional knowledge, eating habits and behaviours. *International Journal of Environmental Research and Public Health*, 15(5). <https://doi.org/10.3390/ijerph15050852>

Liszewska, N., Scholz, U., Radtke, T., Horodyska, K., & Luszczynska, A. (2018). Bi-directional associations between parental feeding practices and children's body mass in parent-child dyads. *Appetite*, 129(August 2017), 192–197. <https://doi.org/10.1016/j.appet.2018.07.011>

Loth, K. A., Mohamed, N., Trofholz, A., Tate, A., & Berge, J. M. (2021). Associations between parental perception of- and concern about-child weight and use of specific food-related parenting practices. *Appetite*, 160(December 2020), 105068. <https://doi.org/10.1016/j.appet.2020.105068>

Lee, Y., & Wan Abdul Manan, W. (2014). Nutritional status, academic performance and parental feeding practices of primary school children in a rural district in Kelantan, Malaysia. *Progress in Health Sciences*, 4(1), 144–152.

Mailey, E. L., & McAuley, E. (2014). Physical Activity Intervention Effects on Perceived Stress in Working Mothers: The Role of Self-Efficacy. *Women and Health*, 54(6), 552–568. <https://doi.org/10.1080/03630242.2014.899542>

Mais, L. A., Warkentin, S., Latorre, M. do R. D. de O., Carnell, S., & Taddei, J. A. A. de C. (2017). Parental Feeding Practices among Brazilian School-Aged

Children: Associations with Parent and Child Characteristics. *Frontiers in Nutrition*, 4(March), 1–10. <https://doi.org/10.3389/fnut.2017.00006>

Martin-Biggers, J., Spaccarotella, K., Berhaupt-Glickstein, A., Hongu, N., Worobey, J., & Byrd-Bredbenner, C. (2014). Come and get it! A discussion of family mealtime literature and factors affecting obesity risk. *Advances in Nutrition*, 5(3), 235–247. <https://doi.org/10.3945/an.113.005116>

McLaren, L., Zarrabi, M., Dutton, D. J., Auld, M. C., & Emery, J. C. H. (2012). Child care: Implications for overweight / obesity in Canadian children? *Chronic Diseases and Injuries in Canada*, 33(1), 1–11. <https://doi.org/10.24095/hpcdp.33.1.01>

Melbye, E. L., Gaard, T., & Verby, N. C. (2011). Validation of the comprehensive feeding practices questionnaire with parents of 10-to-12-year-olds. *BMC Medical Research Methodology*, 11. <https://doi.org/10.1186/1471-2288-11-113>

Melbye, E. L., Øgaard, T., Øverby, N. C., & Hansen, H. (2013). Parental food-related behaviors and family meal frequencies: Associations in Norwegian dyads of parents and preadolescent children. *BMC Public Health*, 13(1), 1–9. <https://doi.org/10.1186/1471-2458-13-820>

Ministry of Health Malaysia. (2005). Recommended Nutrient Intakes for Malaysia 2005. In *Ministry of Health Malaysia*.

Moh. (2013). *Malaysian Dietary Guidelines for Children and Adolescents*. 1–74. [http://www.moh.gov.my/images/gallery/Garispanduan/MDG Children and Adolescents Summary.pdf](http://www.moh.gov.my/images/gallery/Garispanduan/MDG_Children_and_Adolescents_Summary.pdf)

Musher-Eizenman, D., & Holub, S. (2007). Comprehensive feeding practices

questionnaire: Validation of a new measure of parental feeding practices.

Journal of Pediatric Psychology, 32(8), 960–972.

<https://doi.org/10.1093/jpepsy/jsm037>

Nowicka, P., Sorjonen, K., Pietrobelli, A., Flodmark, C. E., & Faith, M. S. (2014).

Parental feeding practices and associations with child weight status. Swedish validation of the Child Feeding Questionnaire finds parents of 4-year-olds less restrictive. *Appetite*. <https://doi.org/10.1016/j.appet.2014.06.027>

Ogden, C. L., Carroll, M. D., Kit, B. K., & Flegal, K. M. (2014). Prevalence of

childhood and adult obesity in the United States, 2011-2012. *JAMA - Journal of the American Medical Association*, 311(8), 806–814.

<https://doi.org/10.1001/jama.2014.732>

Øverby, N. C., Hillesund, E. R., Røed, M., & Vik, F. N. (2020). Association between parental feeding practices and shared family meals. The food4toddlers study.

Food and Nutrition Research, 64, 1–7. <https://doi.org/10.29219/fnr.v64.4456>

Pandey, S., Rai, S., Paudel, N., Shrestha, A., & Gautam, S. (2019). Parental child

feeding practices and their relationship with children's dietary intake and weight status in Nepal. *Journal of Multidisciplinary Healthcare*, 12, 325–333.

<https://doi.org/10.2147/JMDH.S195106>

Poh, B. K., Ng, B. K., Siti Haslinda, M. D., Nik Shanita, S., Wong, J. E., Budin, S.

B., Ruzita, A. T., Ng, L. O., Khouw, I., & Norimah, A. K. (2013). Nutritional status and dietary intakes of children aged 6 months to 12 years: Findings of the Nutrition Survey of Malaysian Children (SEANUTS Malaysia). *British Journal of Nutrition*, 110(SUPPL.3). <https://doi.org/10.1017/S0007114513002092>

Pollard, T. M., Rousham, E. K., & Colls, R. (2011). Intergenerational and familial

approaches to obesity and related conditions. *Annals of Human Biology*, 38(4), 385–389. <https://doi.org/10.3109/03014460.2011.591658>

Reports, P. (2010). Current Population Reports 1.9 * .7 *. *Health (San Francisco)*.

Rosenbaum, P. R. (2021). Causal Inference in Observational Studies. In *Replication and Evidence Factors in Observational Studies*.
<https://doi.org/10.1201/9781003039648-ch2>

Russell, C. G., Haszard, J. J., Taylor, R. W., Heath, A.-L. M., Taylor, B., & Campbell, K. J. (2018). Parental feeding practices associated with children's eating and weight: What are parents of toddlers and preschool children doing?
<https://doi.org/10.1016/j.appet.2018.05.145>

Sathananthan, K., & Tellambura, C. (2002). Partial transmit sequence and selected mapping schemes to reduce ICI in OFDM systems. *IEEE Communications Letters*, 6(8), 313–315. <https://doi.org/10.1109/LCOMM.2002.802067>

Schwarzenberg, S. J., & Georgieff, M. K. (2018). Advocacy for improving nutrition in the first 1000 days to support childhood development and adult health. *Pediatrics*, 141(2). <https://doi.org/10.1542/peds.2017-3716>

Sdravou, K., Printza, A., Andreoulakis, E., Sotiriadou, F., Evangelidou, A., & Fotoulaki, M. (2020). Parental feeding practices data in healthy children and children with gastrointestinal diseases. *Data in Brief*, 31, 106036.
<https://doi.org/10.1016/j.dib.2020.106036>

Serrano Cardona, L., & Muñoz Mata, E. (2013). Paraninfo Digital. *Early Human Development*, 83(1), 1–11. <https://doi.org/10.1016/j.earlhumdev.2006.05.022>

Shloim, N., Edelson, L. R., Martin, N., & Hetherington, M. M. (2015). Parenting

styles, feeding styles, feeding practices, and weight status in 4-12 year-old children: A systematic review of the literature. *Frontiers in Psychology*, 6(DEC). <https://doi.org/10.3389/fpsyg.2015.01849>

Swyden, K., Sisson, S. B., Morris, A. S., Lora, K., Weedn, A. E., Copeland, K. A., & DeGrace, B. (2017). Association Between Maternal Stress, Work Status, Concern About Child Weight, and Restrictive Feeding Practices in Preschool Children. *Maternal and Child Health Journal*, 21(6), 1349–1357. <https://doi.org/10.1007/s10995-016-2239-y>

Torpy, J. M., Lynm, C., & Glass, R. M. (2007). Chronic Diseases of Children. *Jama*, 297(24), 2836. <https://doi.org/10.1001/jama.297.24.2836>

Tschann, J. M., Martinez, S. M., Penilla, C., Gregorich, S. E., Pasch, L. A., de Groat, C. L., Flores, E., Deardorff, J., Greenspan, L. C., & Butte, N. F. (2015). Parental feeding practices and child weight status in Mexican American families: A longitudinal analysis. *International Journal of Behavioral Nutrition and Physical Activity*, 12(1), 1–10. <https://doi.org/10.1186/s12966-015-0224-2>

Verhage, C. L., Gillebaart, M., van der Veek, S. M. C., & Vereijken, C. M. J. L. (2018). The relation between family meals and health of infants and toddlers: A review. *Appetite*, 127(July 2017), 97–109. <https://doi.org/10.1016/j.appet.2018.04.010>

Vollmer, R. L., & Mobley, A. R. (2013). Parenting styles, feeding styles, and their influence on child obesogenic behaviors and body weight. A review. *Appetite*, 71, 232–241. <https://doi.org/10.1016/j.appet.2013.08.015>

Wang, M. C., Naidoo, N., Ferzacca, S., Reddy, G., & Van Dam, R. M. (2014). The Role of Women in Food Provision and Food Choice Decision-Making in

Singapore: A Case Study. *Ecology of Food and Nutrition*, 53(6), 658–677.

<https://doi.org/10.1080/03670244.2014.911178>

Wardle, J., & Carnell, S. (2007). Parental feeding practices and children's weight.

Acta Paediatrica, International Journal of Paediatrics, 96(SUPPL. 454), 5–11.

<https://doi.org/10.1111/j.1651-2227.2007.00163.x>

Wolstenholme, H., Heary, C., & Kelly, C. (2019). Fussy eating behaviours:

Response patterns in families of school-aged children. *Appetite*, 136(January),

93–102. <https://doi.org/10.1016/j.appet.2019.01.009>

Yang, W. Y., Burrows, T., MacDonald-Wicks, L., Williams, L. T., Collins, C. E., &

Chee, W. S. S. (2018). Parent-child feeding practices in a developing country:

Findings from the Family Diet Study. *Appetite*, 125, 90–97.

<https://doi.org/10.1016/j.appet.2018.01.037>

Zaimah, R., Sarmila, M. S., Selvadurai, S., Lyndon, N., Er, A. C., & Norizam

Jamian, M. (2013). The history and current status of dual-career families in

Malaysia. *Asian Social Science*, 9(6), 16–21.

<https://doi.org/10.5539/ass.v9n6p16>

Appendices

Appendix A: Questionnaire in English

RESPONDENT ID:



**FACULTY OF MEDICINE AND HEALTH SCIENCES
DEPARTMENT OF DIETETICS
RESEARCH QUESTIONNAIRE**

**RESEARCH TITLE: PARENTAL-CHILD FEEDING PRACTICES AND IT
ASSOCIATED FACTORS AMONG OUTPATIENT IN HPUPM**

RESERCHERS:

NADIAH SYAHIRAH BINTI SHUHAIMI
INTAN NURZAHIRAH BINTI ABDUL ZAHID

SUPERVISOR:

DR. NOR BAIZURA BINTI MD YUSOP

**This questionnaire is only for research purposes. Please complete ALL the
information in this questionnaire. All information is guaranteed confidential.
Your involvement and cooperation are much appreciated.**

Part 1: CHILDREN INFORMATION

Section A: Socio-demographic factors	
Instructions: Please answer all the following questions and (/) on the box provided. Instructions: Please answer all the following questions	
1.	Age <input type="text"/> years old
2.	Gender <input type="checkbox"/> Female <input type="checkbox"/> Male
3.	Ethnicity <input type="checkbox"/> Malay <input type="checkbox"/> Indian <input type="checkbox"/> Chinese <input type="checkbox"/> Others Please specify:
4.	Heightcm
5.	Weightkg
6.	Have met a dietitian before () Yes () No
7.	Case () New () Followed Up

Section B: Medical history
Instructions: Please answer if applicable
Any medical history/disease:

Section C: Parental-child feeding practices

Instruction : Using the following scale, circle one number for each question accurately explain your answer. Please answer about your child involved in this study.

	Never	Seldom	Half of the time	Most of the time	Always
1. When your child is at home, how often are you responsible for feeding her?					
2. How often are you responsible for deciding what your child's portion sizes are?					
3. How often are you responsible for deciding if your child has eaten the right kind of foods?					

Instruction : Using the following scale, please indicate your weight classification for each of the following growth stages (Circle only one for each question).

	Markedly underweight	Underweight	Normal	Overweight	Markedly overweight
4. Your Childhood (5 to 10 years old)					
5. Your adolescence					
6. Your 20s					
7. At present					

Instruction : Using the following scale, please state your child's weight classification for the different growth stages. (Circle only one answer for each of the following).

	Markedly underweight	Under- weight	Normal	Overwei ght	Markedly overweight
8. Your child during the first year of life					
9. Your child as a toddler					
10. Your child as a pre-schooler					
11 Your child kindergarten through standard 2					
12. Your child from child standard 3 through standard 5					
13. Your child from standard 6 through Form 2					

Instruction : Using the following scale, circle one number for each question accurately explain your answer. Please answer about your child involved in this study.

	Unconc- erned	A little concerned	Neutral concerned	Fairly concerned	Very concerned
14. How concerned are you about your child eating too much when you are not around her?					
15. How concerned are you about your child having to diet					

to maintain a desirable weight?					
16. How concerned are you about your child becoming over weight?					

Instruction : Using the following scale, circle one number for each question accurately explain your answer. Please answer about your child involved in this study.

	Disagree	Slightly disagree	Neutral	Slightly agree	Agree
17. I have to be sure that my child does not eat too many sweets (candy, ice cream, cake or pastries)					
18. I have to be sure that my child does not eat too many high-fat foods					
19. I have to be sure that my child does not eat too much of her favourite foods					
20. I intentionally keep some foods out of my child's reach					
21. I offer sweets (candy, ice cream, cake, pastries) to my child as a reward for good behaviour					
22. I offer my child her favourite foods in exchange for good behaviour					
23. If I did not guide or regulate my child's eating, she would eat too many junk foods					
24. If I did not guide or regulate my child's eating,					

she would eat too much of her favourite foods					
25. My child should always eat all of the food on her plate					
26. I have to be especially careful to make sure my child eats enough					
27. If my child says "I'm not hungry", I try to get her to eat anyway					
28. If I did not guide or regulate my child's eating, she would eat much less than she should					

Instruction : Using the following scale, circle one number for each question accurately explain your answer. Please answer about your child involved in this study.

	Never	Rarely	Sometimes	Mostly	Always
29. How much do you keep track of the sweets (candy, ice cream cake, pies, pastries) that your child eats?					
30. How much do you keep track of the snack food (potato chips, Doritos, cheese puffs) that your child eats?					
31. How much do you keep track of the high-fat foods that your child eats?					

Section c: Parental-child feeding practices (breastfeeding practices)

1. Have you ever breastfed your child?	<input type="checkbox"/> Yes <input type="checkbox"/> No
2. How long did you breastfeed your children?	<input type="checkbox"/> ≤ 6 months <input type="checkbox"/> > 6 months

Section D: Dietary intake (24 hours dietary recall)

Instructions: List the food/drink that your child take in one usual weekday with the amount.

Meal	Food/drink	Amount		
		/scoop	/tbsp	/cup
Breakfast				
Morning tea				
Lunch				
Afternoon tea				
Dinner				

Instructions: List the food/drink that your child take in one usual weekend with the amount.

Meal	Food/drink	Amount		
		/scoop	/tbsp	/cup
Breakfast				
Morning tea				
Lunch				
Afternoon tea				
Dinner				

Section E: Home environment (family meal routine)

Instructions: Read the following statements and tick the boxes with the most appropriate child and family behavior.

Statement	Not true at all	Rarely true	Sometimes true	Usually true	Very true
1. In our family, mealtime is planned in advance					
2. Our family regularly eats the main meal together					
3. In our family, everyone is expected to be home for the main meal					
4. In our family, everyone has a specific role or job to do					
5. In our family, mealtime is flexible, people eat whenever they want					

Section E: Home environment (food security questionnaire)

Statement	Never	Yes, once during the past 6 months	Yes, > once during the past 6 months
1. Did you skip eating or miss meals/food, because there was no food or no money to buy food?			
2. Did you ever not eat for a whole day because there was no food or money to buy food?			
3. Were you ever hungry but did not eat because there was no food or money to buy food?			
4. Did your child/children skip eating or miss meals/food,			

because there was no food or no money to buy food			
5. Did your child/children ever not eat for a whole day because there was no food or money to buy food?			
6. Was/were your child/children ever hungry but did not eat because there was no food or money to buy food?			
Statement	Not true	True, often	True, sometimes
7. "I worried that our food would run out before we got money to buy more"			
8. "The food we bought did not last and we did not have enough money to get more"			
9. "The children were not eating enough because we did not have enough food and we could not afford to buy more"			
10. "We could not feed the children nutritionally adequate meals because we do not have enough food and enough money to buy food more"			

Part 2: PARENT/CAREGIVER INFORMATION

Section A: Socio-demographic characteristics	
Instructions: Please answer all the following questions	
1.	Contact number
2.	Gender <input type="checkbox"/> Female <input type="checkbox"/> Male
3.	Employment status <ul style="list-style-type: none"> • Employed • Unemployed
4.	Total household income <input type="checkbox"/> <RM 2,500 <input type="checkbox"/> RM4,850-RM 10,959

		<input type="checkbox"/> >RM10,961
5.	Parent's education	<input type="checkbox"/> Primary <input type="checkbox"/> Secondary <input type="checkbox"/> Tertiary (College/University)
6.	Parent's marital status	<input type="checkbox"/> Currently married <input type="checkbox"/> Divorced <input type="checkbox"/> Never married



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FAKULTI PERUBATAN DAN SAINS KESIHATAN
JABATAN DIETETIK
BORANG SOAL SELIDIK

**TAJUK KAJIAN: PENGAMBILAN MAKANAN KANAK- KANAK DAN
FAKTOR BERKAITAN DALAM KALANGAN PESAKIT LUAR DI HPUPM**

PENYELIDIK:

NADIAH SYAHIRAH BINTI SHUHAIMI
INTAN NURZAHIRAH BINTI ABDUL ZAHID

PENYELIA:

DR. NOR BAIZURA BINTI MD YUSOP

Borang soal selidik ini hanya untuk tujuan kajian sahaja. Sila lengkapkan semua soalan di dalam borang ini. Semua maklumat tidak akan didedahkan kepada mana mana pihak. Penglibatan dan kerjasama anda amatlah dihargai.

BAHAGIAN 1: MAKLUMAT ANAK

Bahagian A: factor socio-demografi dan antropometri		
Arahan: Sila isi tempat kosong dan tanda (/) pada jawapan yang disediakan.		
1.	Umur	<input type="text"/> <input type="text"/> Tahun
2.	Jantina	<input type="checkbox"/> Perempuan <input type="checkbox"/> Lelaki
3.	Etnik	<input type="checkbox"/> Melayu <input type="checkbox"/> India <input type="checkbox"/> Cina <input type="checkbox"/> Lain-lain Sila nyatakan:.....
4.	Tinggicm
5.	Beratkg
6.	Pernah berjumpa dietitian sebelum ini	() Ya () Tidak
7.	Kes	() Baharu () Followed Up

Bahagian B: Sejarah perubatan
Arahan: Sila jawab jika berkenaan
Sebarang sejarah perubatan/penyakit:

Bahagian C: Pengambilan makanan kanak kanak

Arahan : Dengan menggunakan skala berikut, bulatkan satu nombor untuk setiap soalan yang menjelaskan dengan tepat jawapan anda. Sila jawab mengenai anak anda yang terlibat di dalam kajian ini.

	Tidak langsung	Kadang-kadang	Separuh masa	Kebanyakan masa	Selalu
1. Ketika anak anda berada di rumah, berapa kerapkah tanggungjawab anda memberi makan kepadanya?					
2. Berapa kerapkah anda bertanggungjawab untuk menentukan saiz atau bahagian makanan yang sepatutnya diberikan kepada anak anda?					
3. Berapa kerapkah anda bertanggungjawab untuk menentukan bahawa anak anda telah makan makananyang baik dan sesuai untuknya?					

Arahan : Dengan menggunakan skala berikut, sila tandakan klasifikasi berat badan anda bagi setiap peringkat tumbesaran berikut (Bulatkan hanya satu untuk setiap soalan).

	Sangat kurang berat badan	Kurang berat badan	Sederhana	Berlebihan berat badan	Sangat berlebihan berat badan
4. Zaman kanak-kanak (5-10 tahun)					
5. Zaman remaja					
6. Umur 20an					
7. Sekarang					

Arahan : Dengan menggunakan skala berikut, sila nyatakan klasifikasi berat badan anak anda bagi setiap peringkat tumbesaran tersebut. (Bulatkan hanya satu jawapan bagi setiap yang berikut).

	Sangat kurang berat badan	Kurang berat badan	Sederhana	Berlebihan berat badan	Sangat berlebihan berat badan
8. Anak anda semasa tahun pertama kelahiran					
9. Anak anda semasa umurkanak-kanak					
10. Anak anda semasa pra-sekolah.					
11. Anak anda semasa tadikahingga Tahun dua					
12. Anak anda semasa Tahun 3 hingga Tahun lima					
13. Anak anda semasa Tahun enam hingga Tingkatan 2					

Arahan : Dengan menggunakan skala berikut, bulatkan satu nombor untuk setiap soalan yang menjelaskan dengan tepat jawapan anda. Sila jawab mengenai anak anda yang terlibat dalam kajian ini.

	Tidak bimbang	Agak tidak bimbang	Neutral	Bimbang	Agak bimbang
14. Adakah anda berasa bimbang apabila anak anda makan terlalu banyak apabila anda tidak bersamanya?					

15. Adakah anda berasa bimbang tentang anak anda yang berdiet untuk mengekalkan berat badan yang ideal/sesuai?					
16. Adakah anda berasa bimbang sekiranya anak anda mempunyai berat badan yang berlebihan?					

Arahan : Dengan menggunakan skala berikut, bulatkan satu nombor untuk setiap soalan yang menjelaskan dengan tepat jawapan anda. Sila jawab mengenai anak anda yang terlibat di dalam kajian ini.

	Tidak bersetuju	Tidak bersetuju sedikit	Neutral	Bersetuju sedikit	Bersetuju
17. Saya mesti memastikan anak saya tidak makan terlalu banyak makanan bergula (kandi, ais krim, kek atau pastri).					
18. Saya mesti memastikan anak saya tidak makan terlalu banyak makanan yang tinggi lemak.					
19. Saya mesti memastikan anak saya tidak makan terlalu banyak makanan kegemarannya.					
20. Saya secara sengaja menyembunyikan beberapa jenis makanan daripada anak saya.					
21. Saya memberikan makanan bergula (kandi, ais krim, kek pastri) sebagai ganjaran kepada					

anak saya untuk kelakuan baiknya.					
22. Saya memberikan makanan kegemaran anak saya sebagai pengganti untuk kelakuan baiknya.					
23. Jika saya tidak membimbing atau mengawal cara makan anak saya, dia akan mengambil terlalu banyak makanan ringan.					

24. Jika saya tidak membimbing atau mengawal cara makan anak saya, dia akan mengambil terlalu banyak makanan kegemarannya.					
25. Anak saya mesti menghabiskan semua makanan yang berada di dalam pinggan.					
26. Saya sentiasa memastikan anak saya makan makanan dengan secukupnya.					
27. Walaupun anak saya mengatakan tidak lapar, saya tetap akan cuba menyuruhnya makan.					
28. Jika saya tidak membimbing atau mengawal cara makan anak saya, dia akan makan kurang daripada yang sepatutnya.					

Arahan : Dengan menggunakan skala berikut, bulatkan satu nombor bagi setiap soalan yang menjelaskan dengan tepat jawapan anda. Sila jawab mengenai anak anda yang terlibat di dalam kajian ini.

	Tidak tahu langsung	Jarang	Kadang-kadang	Kebanyakan	Selalu
29. Berapa banyak yang anda tahu mengenai makanan bergula yang anak anda makan (kandi, kek, pai, ais krim, pastri)?					
30. Berapa banyak yang anda tahu mengenai makanan ringan yang anak anda makan (cip kentang, Doritos, puf keju)?					
31. Berapa banyak yang anda tahu mengenai makanan yang tinggi lemak yang anak anda makan?					

Section C: Pengambilan makanan kanak kanak (amalan penyusuan susu ibu)

1. Adakah anda pernah menyusukan anak anda?	() Ya () Tidak
2. Berapa lama anda menyusukan anak anda?	() \leq 6 bulan () $>$ 6 bulan

Bahagian D: Pengambilan diet (Pengambilan pemakanan dalam 24jam)

Arahan : Senaraikan makanan dan minuman yang diambil anak pada hari minggu biasa dan nyatakan jumlahnya.

Waktu	Makanan/minuman	Jumlah		
		/Senduk	/sudu besar	/ Cawan
Sarapan				
Minum pagi				
Makan tengahari				
Makan petang				
Makan malam				

Arahan : Senaraikan makanan dan minuman yang diambil anak pada hari hujung minggu biasa dan nyatakan jumlahnya

Waktu	Makanan/minuman	Jumlah		
		/Senduk	/sudu besar	/ Cawan
Sarapan				
Minum pagi				
Makan tengahari				
Makan petang				
Makan malam				

Bahagian E: Suasana di rumah

Arahan: Sila baca pernyataan berikut dan tandakan di kotak yang paling sesuai dengan tingkah laku anak dan keluarga

Pernyataan	Tidak benar sama sekali	Mungkin benar	Kadang kala benar	Selalunya benar	Sangat benar
1. Dalam keluarga kami, waktu makan dirancang lebih awal					
2. Keluarga kami kerap makan bersama					
3. Dalam keluarga kami, semua orang diharapkan berada di rumah untuk makan bersama.					
4. Dalam keluarga kami pada waktu makan, setiap orang mempunyai peranan atau tugas tertentu untuk dilakukan.					
5. Dalam keluarga kami, waktu makan adalah fleksibel; ahli keluarga makan bila bila masa mereka mahu.					

Bahagian F: Suasana di rumah (keselamatan makanan)

Pernyataan	Tidak pernah	Ya, sekali dalam tempoh 6 bulan yang lalu	Ya, > sekali dalam tempoh 6 bulan yang lalu
1. Adakah anda ponteng makan atau terlepas makan, kerana tiada makanan atau			

tiada wang untuk membeli makanan?			
2. Pernahkah anda tidak makan sepanjang hari kerana tiada makanan atau wang untuk membeli makanan?			
3. Adakah anda pernah lapar tetapi tidak makan kerana tiada makanan atau wang untuk membeli makanan?			
4. Adakah anak anda ponteng makan atau terlepas makan/makanan, kerana tiada makanan atau tiada wang untuk membeli makanan			
5. Pernahkah anak anda tidak makan sepanjang hari kerana tiada makanan atau wang untuk membeli makanan?			
6. Adakah anak anda pernah lapar tetapi tidak makan kerana tiada makanan atau wang untuk membeli makanan?			
Pernyataan	Tidak benar	Benar, selalu	Benar, kadang-kadang
7. "Saya bimbang makanan akan habis sebelum kita mendapat wang untuk membeli lebih banyak"			
8. "Makanan yang kami beli tidak bertahan dan kami tidak mempunyai wang yang cukup untuk mendapatkan lebih banyak"			
9. "Anak-anak tidak cukup makan kerana kami tidak cukup makanan dan kami tidak mampu untuk membeli lebih banyak"			
10. "Kami tidak dapat memberi makan anak-anak makanan yang mencukupi kerana kami tidak mempunyai makanan yang cukup dan			

wang yang cukup untuk membeli makanan lagi"			
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PART 2: MAKLUMAT IBUBAPA/PENJAGA

Bahagian A: Ciri-ciri socio-demografi	
Arahan: Sila jawab semua soalan dan tandakan (/) di tempat berkenaan.	
1.	Nombor telefon
2.	Jantina <input type="checkbox"/> Perempuan <input type="checkbox"/> Lelaki
3.	Status pekerjaan
4.	Jumlah pendapatan isi rumah <RM 2,500 <input type="checkbox"/> RM4,850-RM 10,959 <input type="checkbox"/> >RM10,961 <input type="checkbox"/>
5.	Pendidikan ibu bapa () Rendah () Menengah () Tertiari (Kolej/Universiti)
6.	Status perkahwinan ibu bapa () Pada masa ini berkahwin () Bercerai () Tidak pernah berkahwin

Appendix C: Ethical clearance from JKEUPM

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

Date: 07 February 2022

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 '**FACTOR ASSOCIATED WITH RISK OF MALNUTRIITION AMONG PAEDIATRIC OUTPATIENTS IN HPUPM**' has been approved.

The approval is **valid from 07 FEBRUARY 2022 until 07 FEBRUARY 2023**.

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/failedokumen>).

If you have any enquiries, please contact at number 03-97691244/1602.

Note: Please use this reference number for any transaction:- **JKEUPM-2021-892**

Thank you.

Yours faithfully,

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

Appendix E: Subject's Information Sheet and Consent (English)

**JAWATANKUASA ETIKA UNIVERSITI UNTUK
PENYELIDIKAN MELIBATKAN MANUSIA (JKEUPM)
UNIVERSITI PUTRA MALAYSIA, 43400 UPM SERDANG,
SELANGOR, MALAYSIA**



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 :

Factors Associated With Risk of Malnutrition among Paediatric Outpatients In Universiti Putra Malaysia Teaching Hospital (HPUPM)

2. INTRODUCTION:

Malnutrition among children is one of the major health problems faced by many countries especially those low- and middle-income countries. Paediatric population who are malnourished may have a higher risk of complications, longer hospital stays, and lower quality of life. However, the nutritional risk among paediatric outpatients and its associated factors are not well understood. This study aims to fulfill the research gap. Hence, you are invited to participate in the study and contribute voluntarily in this area of study. The purpose of this study is to determine the associated factors of malnutrition among paediatric outpatients in Universiti Putra Malaysia Teaching Hospital (HPUPM). This study will require the enrollment of 201 respondents.

3. WHAT WILL YOU HAVE TO DO?

First, once the respondent agrees to participate in the study, respondents will be given the consent form and they are required to fill in the form. Next, their phone number will be recorded. During the meeting, malnutrition risk screening will be conducted and respondents are required to answer 3 questions verbally. Besides, researcher will observe any diminished subcutaneous fat/muscle mass/hollow face present as part of STRONG kids screening tool. Later, a set of questionnaires will be sent and

respondents can answer during their free time which will take around 7 minutes. Other than that, respondents will receive a phone call in which respondents need to report their dietary intake in the past 24 hours. 24-hour diet recall will require approximately 8 minutes of the phone call. Participants are required to answer all the questions honestly throughout the study. Besides, the respondent's medical condition will be obtained from the medical record of the hospital data system. However, respondent participation is voluntary, and respondents may withdraw anytime without penalty or loss of benefit to which the participant is entitled.

4. WHO SHOULD NOT PARTICIPATE IN THE STUDY?

Paediatric outpatients who are in the neonatology unit aged less than 2 years old or having a serious illness or are currently in the emergency unit are excluded from the study.

5. WHAT WILL BE THE BENEFITS OF THE STUDY:

(a) TO YOU AS THE SUBJECT?

This study results may or may not provide benefits to you. You will be able to identify the malnutrition risk of your child based on the result of the study and able to access their records. Besides, policy makers and healthcare providers may benefit from this study as this study will identify the issue of malnutrition among paediatric outpatients in HPUPM and they may provide further action plans to cope with this issue. Research gap available in this topic could be filled by this study.

(b) TO THE INVESTIGATOR?

This study is able to provide researchers to determine the association between socioeconomic factors, medical factors, dietary factors, feeding practices, and household environment factors with the risk of malnutrition among paediatric outpatients in Universiti Putra Malaysia Teaching Hospital (HPUPM).

6. WHAT ARE THE POSSIBLE RISKS?

There is no possible risks among respondents of the study. This is because this study does not require any invasive procedures or impose any side effects.

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

All participants' information is confidential and is used for the purpose of this study only. Respondent's identity will not be published or presented throughout this study. All data obtained not be made publicly available, to the extent permitted by law.

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

If you have any enquiries, please contact the researcher of this study, Intan Nurzahirah at telephone number 013-7173940 or contact the research supervisor, Dr. Nor Baizura Md Yusop, lecturer from Faculty of Medicine and Health Sciences, UPM at telephone number 013-2094595. JKEUPM Ethics Review Panel has approved the study. Hence, please contact JKEUPM to obtain further information regarding rights of study participants, including grievances and complaints.

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
(Respondent) (Witness)

Date :..... Name :.....

I/C No. :.....

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

Date

Signature

Phone number:.....

(Researcher



© COPYRIGHT UPM

Appendix F: Subject's Information Sheet and Consent (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

Faktor-Faktor Berkaitan Dengan Risiko Malnutrisi dalam Kalangan Pesakit Luar Pediatrik Di Hospital Pengajar Universiti Putra Malaysia (HPUPM).

2. PENGENALAN

Malnutrisi dalam kalangan kanak-kanak merupakan salah satu masalah kesihatan utama yang dihadapi oleh banyak negara terutamanya negara berpendapatan rendah dan sederhana. Populasi pediatrik yang kekurangan zat mungkin mempunyai risiko komplikasi yang lebih tinggi, penginapan hospital lebih lama dan kualiti hidup yang lebih rendah. Walau bagaimanapun, risiko pemakanan dalam kalangan pesakit luar kanak-kanak dan faktor yang berkaitan dengannya tidak difahami dengan baik. Kajian ini bertujuan untuk memenuhi jurang kajian. Oleh itu, anda dijemput untuk mengambil bahagian dalam kajian ini dan menyumbang secara sukarela dalam bidang pengajian ini. Tujuan kajian ini adalah untuk mengetahui faktor-faktor yang berkaitan dengan kekurangan zat makanan dalam kalangan pesakit luar kanak-kanak di Hospital Pengajar Universiti Putra Malaysia (HPUPM). Kajian ini memerlukan penyertaan seramai 201 orang responden.

3. APAKAH YANG PERLU ANDA LAKUKAN?

Pertama sekali, apabila responden bersetuju untuk menyertai kajian, responden akan diberikan borang kebenaran dan mereka dikehendaki mengisi borang tersebut. Seterusnya, nombor telefon mereka akan direkodkan. Semasa perjumpaan tersebut, saringan risiko kekurangan zat makanan akan dijalankan dan responden dikehendaki menjawab 3 soalan secara lisan. Selain itu, pengkaji akan memerhatikan sebarang pengurangan lemak subkutan/jisim otot/muka berongga pada responden sebagai sebahagian daripada alat saringan STRONG kids. Kemudian, satu set soal selidik akan dihantar dan responden boleh menjawab pada masa lapang yang mengambil masa sekitar 7 minit. Selain itu, responden akan menerima panggilan telefon yang mana responden perlu melaporkan pengambilan diet mereka dalam tempoh 24 jam yang lalu. Pengingatan semula diet 24 jam akan memerlukan lebih kurang 8 minit panggilan telefon. Peserta dikehendaki menjawab semua soalan dengan jujur sepanjang kajian dijalankan. Selain itu, keadaan kesihatan responden akan diperolehi daripada rekod perubatan sistem data hospital. Walau bagaimanapun, penyertaan responden adalah

secara sukarela, dan responden boleh menarik diri pada bila-bila masa tanpa penalti atau kehilangan faedah yang layak kepada peserta.

4. SIAPA YANG TIDAK BOLEH MENYERTAI KAJIAN INI?

Pesakit luar pediatrik yang berada di unit neonatologi yang berumur kurang daripada 2 tahun atau menghidap penyakit serius atau sedang berada di unit kecemasan dikecualikan daripada kajian.

5. APAKAH FAEDAH MENYERTAI KAJIAN INI?

a) KEPADA ANDA SEBAGAI PESERTA?

Hasil kajian ini mungkin memberi manfaat atau tidak kepada anda. Anda akan dapat mengenal pasti risiko kekurangan zat makanan anak anda berdasarkan hasil kajian dan dapat mengakses rekod mereka. Selain itu, penggubal dasar dan penyedia penjagaan kesihatan mungkin mendapat manfaat daripada kajian ini kerana kajian ini akan mengenal pasti isu kekurangan zat makanan dalam kalangan pesakit luar pediatrik di HPUPM dan mereka mungkin menyediakan pelan tindakan lanjut untuk menangani isu ini. Jurang penyelidikan yang terdapat dalam topik ini boleh diisi oleh kajian ini.

b) KEPADA PENYELIDIK?

Kajian ini mampu memberi pengkaji untuk menentukan perkaitan antara faktor sosioekonomi, faktor perubatan, faktor pemakanan, amalan pemakanan, dan faktor persekitaran isi rumah dengan risiko kekurangan zat makanan dalam kalangan pesakit luar kanak-kanak di Hospital Pengajaran Universiti Putra Malaysia (HPUPM).

6. ADAKAH IA BERISIKO?

Tiada kemungkinan risiko dalam kalangan responden kajian. Ini kerana kajian ini tidak memerlukan sebarang prosedur invasif atau mengenakan sebarang kesan sampingan.

7. ADAKAH MAKLUMAT DAN IDENTITI SAYA KEKAL RAHSIA?

Semua maklumat dan identiti peserta adalah sulit dan digunakan untuk tujuan kajian ini sahaja. Identiti responden tidak akan diterbitkan atau dibentangkan sepanjang kajian ini. Semua maklumat yang diperolehi tidak boleh didapati secara umum, setakat yang dibenarkan oleh undang-undang.

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

Sekiranya terdapat sebarang pertanyaan, sila hubungi penyelidik kajian ini, Intan Nurzahirah di nombor telefon 013-7173940 atau hubungi penyelia penyelidikan, Dr. Nor Baizura Md Yusop, pensyarah Fakulti Perubatan dan Sains Kesihatan, UPM, di nombor telefon 013- 2094595. Panel Semakan Etika JKEUPM telah meluluskan kajian tersebut. Justeru itu, sila hubungi JKEUPM untuk mendapatkan maklumat lanjut

mengenai hak peserta kajian, termasuk rungutan dan aduan.

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 Helaiian 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

.....

(Responden)

(Saksi)

Tarikh :.....

Nama :.....

No. K/P:

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

Tarikh

Tandatangan

Nombor telefon.....

(Penyelidik)



Appendix G: Turnitin report

Nadiah Syahirah binti Shuhaimi (204668)

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PRIMARY SOURCES

- 1 Wai Yew Yang, Tracy Burrows, Lesley MacDonald-Wicks, Lauren T. Williams, Clare E. Collins, Winnie Siew Swee Chee. "Parent-child feeding practices in a developing country: Findings from the Family Diet Study", *Appetite*, 2018
Publication 4%
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- 3 Submitted to Monash University
Student Paper 2%
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- 5 Catherine Georgina Russell, Jillian J. Haszard, Rachael W. Taylor, Anne-Louise M. Heath, Barry Taylor, Karen J. Campbell. "Parental feeding practices associated with children's