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Perception on Postpartum Dietary Practices Among Malay Women in Hospital Tengku Ampuan Afzan (Htaa), Kuantan, PahanP

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ABSTRACT

Traditional postpartum practices generally involve food proscriptions and prescriptions. Certain foods are prohibited due to their properties such as “windy”, “cold” and “hot”. As lactating mother needs higher energy and protein intake, this practice may impact their ability to meet their nutritional requirements. Consequently, their health may not be fully restored, wound healing would be slowed, and lactation success may be interfered. This study was conducted in Hospital Tengku Ampuan Afzan (HTAA) to investigate Malay mothers’ perception on confinement dietary practices during postpartum period. A total of 80 respondents aged between 23-43 years old were interviewed using a questionnaire which consisted of an extensive list of food items. It was found that 100% of respondents mentioned that they do observe the traditional postpartum practices after childbirth with most of them (63.0%) chose to confine for up to 44 days. Flavored rice, *roti canai* and various types of noodle were generally avoided during postpartum period due to their ‘oily/fatty’ property. Tubers, and most fruits and vegetables were also avoided due to their ‘cold’ property. Moreover, the

famous 'reason' for exclusion of fish was '*bisa*' and 'causing itchiness' for seafood. Milk and dairy products were included in majority of respondents' diet. Out of 80, 43 (53.8%) respondents avoided soy sauce because it was believed to give negative effect on wound healing. Other than that, iced drink, tea and sugarcane drink were avoided due to their 'cold' and 'sharp/sour' properties. In addition, statistical tests of all food items show that there is no difference in terms of level of acceptance for each food between women delivered via normal delivery or caesarean section. It is concluded that postpartum food taboo beliefs are still prevalent among Malay women. Extensive food prohibition and restriction causes limited food choices which may affect mothers' nutritional intake. Thus, a more balanced diet should be recommended for Malay mothers during postpartum period to ensure adequate nutrient intake, as much as culturally acceptable.

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**PERCEPTION ON POSTPARTUM DIETARY PRACTICES AMONG
MALAY WOMEN IN HOSPITAL TENGKU AMPUAN AFZAN (HTAA),
KUANTAN, PAHANG**

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ABSTRACT

Traditional postpartum practices generally involve food proscriptions and prescriptions. Certain foods are prohibited due to their properties such as “windy”, “cold” and “hot”. As lactating mother needs higher energy and protein intake, this practice may impact their ability to meet their nutritional requirements. Consequently, their health may not be fully restored, wound healing would be slowed, and lactation success may be interfered. This study was conducted in Hospital Tengku Ampuan Afzan (HTAA) to investigate Malay mothers’ perception on confinement dietary practices during postpartum period. A total of 80 respondents aged between 23-43 years old were interviewed using a questionnaire which consisted of an extensive list of food items. It was found that 100% of respondents mentioned that they do observe the traditional postpartum practices after childbirth with most of them (63.0%) chose to confine for up to 44 days. Flavored rice, *roti canai* and various types of noodle were generally avoided during postpartum period due to their ‘oily/fatty’ property. Tubers, and most fruits and vegetables were also avoided due to their ‘cold’ property. Moreover, the famous ‘reason’ for exclusion of fish was ‘*bisa*’ and ‘causing itchiness’ for seafood. Milk and dairy products were included in majority of respondents’ diet. Out of 80, 43 (53.8%) respondents avoided soy sauce because it was believed to give negative effect on wound healing. Other than that, iced drink, tea and sugarcane drink were avoided due to their ‘cold’ and ‘sharp/sour’ properties. In addition, statistical tests of all food items show that there is no difference in terms of level of acceptance for each food between women delivered via normal delivery or caesarean section. It is concluded that postpartum food taboo beliefs are still prevalent among Malay women. Extensive food prohibition and restriction causes limited food choices which may affect mothers’ nutritional intake. Thus, a more balanced diet should be recommended for Malay mothers during postpartum period to ensure adequate nutrient intake, as much as culturally acceptable.

KEYWORDS: Postpartum, Dietary practices, Food taboos, Confinement

INTRODUCTION

Postpartum confinement practice is a norm among Asian communities. It is a time which most societies view it as a vulnerable time for the mother and her baby (American Public Health Association, 2001; Heh, 2004). Postpartum period is defined as an interval of time starting from an hour after child delivery until the following six weeks, and it is a crucial time for a woman (World Health Organization, 2010). Hence, after the delivery of baby, mothers need to observe their food intake and adhere to other practices such as smoking and roasting in order to reduce their vulnerability to illness and death. Generally, the mother-becoming process includes certain dietary and behavioural prescriptions (Manderson, 1981). The common ideas surrounding it are the importance of 'hot and cold', and the necessity of confinement after giving birth within a specific period (Kim-Godwin, 2003).

The concept of 'hot and cold' and 'wind related illness'

Chinese, Malay and Indian culture health status was influenced by the concept of 'heat' and 'cold' and the effect of wind and air (Rice, 2012; Sich, 2012). The concept of 'hot and cold' does not usually refer to actual temperature states but abstract qualities such as hot and cold foods, bodily constitutions, disease, pregnancy, and sources of heat and cold (Pool, 1987). As in Chinese culture, 'cold' refers to the intrinsic nature of the foods such as lotus are cold because they grow in watery places, and root vegetables such as turnips are cold because they grow in the dark, damp earth (Pillsbury, 1978). Among Malays, foods considered 'hot' were animal and vegetable fats, alcohol, spices, animal proteins, salty foods, and bitter foods. Meanwhile, fruits and vegetables which were juicy, which exude viscous matter '*lendir*', and sour, plants that taste '*kelat*', vines, creepers, and climbers were considered as 'cold' foods (Laderman, 1983). 'Hot and cold' concept is also applied in the state of pregnancy and childbirth that differs between cultures (Pool, 1987; Manderson and Matthews, 1981).

Another common belief in many eastern cultures is the concept of 'wind related illnesses' (Kamil and Khoo, 2006). This concept has been interpreted in various ways such as rheumatic problems, and the presence or excessive accumulation of air in body organs such as stomach, and head. Among foods claimed to cause excessive wind were watermelon, jackfruit, bean sprouts, and long bean.

Traditional postpartum dietary practices

Postpartum period is also a period of confinement for almost every culture. Chinese, traditionally will practise "sitting a month" or *zao yuezi* for 30 to 40 days of postpartum period (Liu *et al.*, 2006; Heh, 2004). In addition, in other Southeast Asian countries such as Laos, Lao, Khmu and Hmong tribes adhere to confinement practices starting from 2 days to 1 month with addition of subsequent phase of ranging from 3 months to 2 years (Bouttasing *et al.*, 2012). Sein (2012) examined perceived duration of postpartum and concluded that most young women in Yangon district, Myanmar agreed that postpartum period is 7 days after childbirth and only a

few of them up to 30 to 45 days. In Singapore, Naser et al., (2012) discovered that Malay women conform to 44 days of confinement and one of the respondents said that she need to observe “*pantang*” for 44 days with complete rest at home.

In Malaysia, Poh *et al.*, (2005) conducted a study among Malaysian Chinese and found that majority of respondents (82%) practise confinement period of 30 days. According to Colley (1978), Indian women adhere to similar length of confinement period too. As for Malay women, Manderson (1981) reported that the period of confinement is 40 to 44 days. Laderman (1984) reported that 39% of Malay women interviewed said they have done dietary restrictions for full 40 days while there are other respondents who confined for 100 days (1%), less than one week (19%), 2 - 3 weeks (19%) and 21% of them never had dietary restriction at all. However, Laderman (1984) concluded that, there were 60% of women who did not stick to 40 days of confinement period due to flexibility in term of beliefs and practices. Manderson (1981) also agreed that the food taboos practised are inconsistent. Some people practise at least some of its components while full term practice is common.

In term of prevalence, Harn (1992) stated that out of 414 Chinese women, 95% of them adhere to confinement period. Laderman (1984) reported 79% of 145 Malay women interviewed did confinement practices even though there were differences in term of exact period of confinement. A study performed among all races (Malay, Chinese and Indian) in Seremban, Malaysia showed that 64.3% of the multi-racial respondents followed “*pantang-larang*” while 85.7% said they took special diet.

Studies among Chinese women after childbirth have found that they need to avoid any intake of raw and “cold” foods such as turnips and cabbages as it is believed to cause illness in the future (Pillsbury, 1978). It is also believed that “cold” foods will cause diarrhoea in baby and mother, body swelling, stomach discomfort, aches and pain, delay in lochia expulsion and cough (Raven et al., 2007). In addition, they are encouraged to consume “hot” foods such as chicken because they are thought to “create fire” in the body and help to restore health, to enrich blood, to encourage lochia expulsion, and to stimulate breast milk production (Pillsbury, 1978; Raven et al., 2007). Among factors influencing postpartum practices are the educational background of both husband and wife, location of residence (urban, suburban or rural), family income, postnatal visit, and nutrition and health care educational courses attended by the mother (Liu et al., 2006).

The general idea of dietary restrictions during confinement period was to promote the well-being of the mother and her baby (Kaewsarn, 2003; Sein 2012). ‘*Yue Fai*’ or ‘lying by the fire’ is a common practice of confinement in Thailand. It is believed that mothers become cold and wet after childbirth. Thus, mothers will lie by a hot fire to warm their bodies and dry out their insides (Phongphit and Hewison, 1990). Buffalo meat, fresh vegetables, and fresh fish are perceived to be harmful as they may cause sickness to the women and could decrease breast milk production (Kaewsarn, 2003). There were also beliefs that hot food such as pork, cold food

such as duck and cucumber, food induces wind or acidity, and food causing hypertension such as preserved salted fish, food causing dizziness such as seafood and food causing drowsiness such as fermented bamboo shoot should be avoided during puerperium. On the other hand, chicken was believed to have wound healing ability and soup will promote breast milk production (Sein, 2012).

In Vietnamese traditional medicine, health requires balance between *am* and *duong* which is equivalent to the Chinese *yin* and *yang* concept (Ladinsky et al., 1987). In their culture, pregnancy is considered as 'hot' state. Once the woman delivers her baby, she goes into 'cold' state. A study revealed that majority of the Vietnamese women believed that they need to eat a lot during postpartum period which will help them to rebuild their strength, promote recovery, and improve their breast feeding (Lundberg and Trieu Thi, 2011). Although they need to eat in large quantity, all of them restrict types of food that they can eat such as avoiding 'cold' foods. 'Hot' or 'warm' food such as meat and eggs which are thought to enrich the blood, help recovery, encourage expulsion of lochia, and stimulate lactation. Apart from that, the food can be made 'hot' or 'warmer' by adding ginger and wine. The most common food eaten is pig's trotter with papaya or red bean and potato, cooked and eaten with rice. It is believed that these foods help to stimulate lactation.

In Malay traditional practice, confinement period ranges from 40 to 44 days (Naser et al., 2012; Laderman, 1987). Food that have properties such as 'toxic' or 'poison' (*bisa*), 'sharp', 'cold', 'oily', 'itchy', 'watery', and 'windy' should be avoided during this period (Manderson, 1981; Wilson, 1973). Table 1 summarises the types of foods based on their properties. Malay mothers only drink root medicines in order provide "heat" while tea is considered as "cold" (Manderson, 1981; Laderman, 1987). It shows similarities between beliefs and practices between Chinese and Malay mothers. On the other hand, warm ginger drink and coffee are not prohibited (Manderson, 1981).

A descriptive study among Chinese women in Kuala Lumpur found that during confinement period, they adhered to a special dietary practice (Poh et al., 2005). Majority of them considered most of the vegetables and fruits as "cold", and seafood and most fish as "poisonous" which need to be avoided during confinement. Moreover, foods that were encouraged during this time were sand goby fish (*haruan*), pork, chicken, eggs and organ foods. Sand goby fish is especially encouraged for women who underwent caesarean section as it would enhance dermal wound healing (Baie and Sheikh, 2000). In addition, rice and most spices were categorized as hot food. The most common 'hot' ingredients used in Chinese cooking for postpartum women were ginger and sesame oil.

Summary

Based on available literature, traditional postpartum care seems to still be prevalent among women from various cultures. Postpartum period is a crucial period for women to recover her health. Thus, adequate nutrition is important for them. However, there are very little studies

investigating postpartum care among Malay women in Malaysia. More information is needed in order to learn more about the 'reasons' for food prohibition and restriction during postpartum period. Moreover, further investigation may be needed to see how these traditional beliefs survive modernity in today's context. Hence, this study was conducted in order to investigate Malay mothers' perception on confinement dietary practices during postpartum period.

MATERIALS AND METHODS

Respondents of Study

A total of 80 women were included in this study. They were mothers who had delivered their babies at a postnatal ward in HTAA. Prior to interviews, consent was obtained from each respondent verbally. A short and concise explanation about the objectives of the research was given and subjects were assured about confidentiality of information shared.

Questionnaire and interviews

A set of questionnaires was used to collect data on the sociodemographic backgrounds, postpartum practices, and food taboos observed during postpartum period. It is a thematic questionnaire both with closed and open-ended questions.

The questionnaire consisted of three sections. Section A was for demographic data, Section B for information regarding confinement practices during postpartum period and Section C includes a list of foods with their acceptance and the reasons behind their restrictions. The questionnaire was interview-administered and was conducted in Malay.

A pilot study was conducted on 17 subjects in the ward for one week. After that, some changes were made to improve the questionnaire such as additional of food lists and encoding reasons for foods prohibition.

Statistical Analysis

The analysis was performed either by using Microsoft Excel 2007 software or SPSS 12.0 (SPSS Inc., Chicago, I.L., USA). The results were presented through several descriptive statistics using non-parametric tests. The differences were regarded as significant at 95% confidence interval (CI). Level of acceptance for each food item was presented descriptively.

Cronbach's Alpha test was also performed in order to determine the reliability of the food lists. It is a measure of internal consistency that shows how closely related a set of items are as a group.

RESULTS

Participants

The characteristics of the respondents are as presented in Table 1. Out of 80, 47 (58.8%) of the respondents were housewives. Majority of respondents (66.3%) were from east coast region which includes Pahang, Kelantan, and Terengganu. These women were either staying with their in-laws or have settled down in Pahang. Majority of the respondents (52.7%) from east coast region is from Pahang. 52.5% of respondents experienced normal delivery and the rest by caesarean section.

Table 1 Demographic characteristics of postpartum women in the study (n = 80)

| Characteristics | Mean/No | SD | Range/ % |
|---------------------|---------|-----|----------|
| Age (years) | 30.3 | 4.6 | 23-43 |
| Employment | | | |
| - Government | 18 | | 22.5% |
| - Private | 8 | | 10.0% |
| - Homemaker | 47 | | 58.8% |
| - Self-employed | 7 | | 8.8% |
| Education level | | | |
| - Primary | 9 | | 11.3% |
| - Secondary | 40 | | 50.0% |
| - Tertiary | 31 | | 38.8% |
| Method of delivery | | | |
| - Normal | 42 | | 52.5% |
| - Caesarean section | 38 | | 47.5% |
| Parity | 2.4 | 1.4 | 1-6 |
| - 1 | 29 | | 36.3% |
| - 2 and more | 51 | | 63.7% |
| Hometown | | | |
| - North | 7 | | 8.8% |
| - Central | 3 | | 3.8% |
| - East coast | 53 | | 66.3% |
| - Southern | 4 | | 5.0% |
| - East Malaysia | 2 | | 2.5% |

SD – standard deviation

Postpartum health belief and practice

Postpartum women's perception, belief and practice regarding traditional postpartum confinement practices were assessed. Respondents were asked whether they take the food prepared by the hospital. Majority of them (96.3%) answered that they took the food. However, 83.8% of them did not finish the meal. The top reason was because they were in '*pantang*' (confinement) (57.5%) followed by having no appetite (20%). It was indeed observed that the hospital food served in the ward such as fried chicken was not culture-friendly.

Next, they were asked about their adherence to postpartum confinement practices. As expected, 100% of the respondents mentioned that they do conform to the practices. Out of 80, 52 respondents said that they conform to the practices since their first childbirth and the rest of them are going through it for the first time. 79 out of 80 respondents believed the good effects following the practices. The reasons for practicing it are translated into three themes which are for health benefits (52.5%), maintaining good body image (2.5%) and following others' advices (35%). Most respondents (92.5%) did not believe that postpartum confinement practices will negatively affect breast feeding success and their health.

Respondents were also asked about their source(s) of information regarding postpartum confinement practices. Majority of respondents (96.3%) mentioned family as their sources of information. Family member usually indicates mother or mother-in-law. Out of 80 respondents, 47 of them have various ranges of sources of information such as internet and books/magazine.

Figure 1 shows the length for confinement period mentioned by respondents. From the chart, majority of Malay women (65%) chose to confine for up to 44 days which is longer than other cultures' practices. Surprisingly, two respondents (2.5%) chose to practice confinement for one whole year.

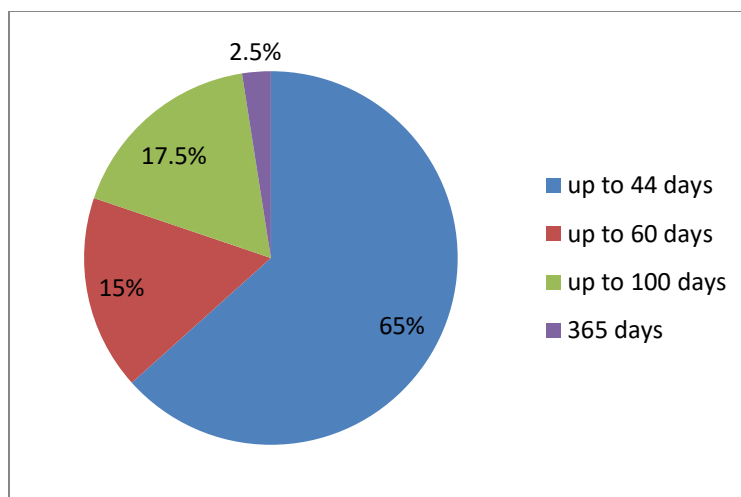


Figure 1 duration of confinement period among Malay women

Postpartum food taboos and food acceptance

Table 2 shows the acceptance of various types of carbohydrate foods during confinement, and their 'reason' according to respondent's belief. All respondents (100%) agree that white rice is allowed during postpartum period. In addition, majority of respondents said that flavoured rice such as *nasi minyak*, *nasi lemak*, and *nasi beriyani*, yellow noodle and *roti canai* are prohibited because they are oily and fatty foods. On the other hand, potato, sweet potato, tapioca and pumpkin are prohibited due to their gastrointestinal (GIT) effect, specifically 'windy'. Yam was considered as '*bisa*' or 'poisonous'.

| Starchy foods | Prohibited (%) | Reason for restriction or prohibition |
|---|----------------|---------------------------------------|
| Flavored rice (eg. <i>Nasi minyak</i> , <i>nasi lemak</i>) | 66 (82.5) | Fatty/oily; Unsure |
| White rice | 0 (0.0) | |
| Bread | 13 (16.3) | Ingredient; Unsure |
| Yellow noodle | 59 (73.8) | Fatty/oily; Unsure |
| Kuey-teow | 54 (67.5) | Unsure; Fatty/oily |
| Pasta | 48 (60.0) | Unsure; Fatty/oily |
| Laksa | 57 (71.3) | Unsure; Ingredient |
| <i>Roti canai</i> | 63 (78.8) | Fatty/oily; Unsure |
| Corn | 39 (48.8) | Unsure; GIT effects |
| Wheat flour | 7 (8.8) | Unsure; GIT effects and |

| | | | 'bisa' |
|--|--------------|-----------|--------------------------------------|
| Table 2 Two most mentioned reasons for restriction or prohibition of starchy foods | Pumpkin | 68 (85.0) | GIT effect; Unsure |
| | Potato | 47 (58.8) | GIT effects; Unsure |
| | Tapioca | 62 (77.5) | GIT effects; Unsure |
| | Sweet potato | 59 (73.8) | GIT effects; Unsure |
| | Yam | 62 (77.5) | Causing itchiness/ 'bisa'; Unsure |

Table 3 shows that more than 50% of respondents consider tuna (*ikan tongkol*), catfish (*keli*), stingray, wolf herring (*ikan parang*), Malaysian river catfish (*ikan patin*) and seafood such as crabs and prawns cannot be eaten during postpartum period. This is due to their 'causing itchiness/ *bias*' property. In addition, the most accepted fish were yellow-banned travelly (*ikan selar*) and sand goby fish (*haruan*). Besides fish, majority of respondents also avoided red meat, legumes, egg, and animal organs. However, most women were unsure of the reason for restriction of meat (27.5%), legumes (25.0%) and animal organs (27.5%). Many of them mentioned that eating egg will cause the childbirth wound to exude puss. Hence, their wound healing process will be affected. Most women (48.8%) avoided chicken as they believed that eating chicken will cause itchiness or thought to be '*bisa*' food. Some respondents mentioned that chicken is only permitted after 2 to 3 weeks of childbirth.

| Protein foods | Prohibited (%) | Reasons for restriction or prohibition |
|---|----------------|---|
| Yellow-banned travelly (<i>Selar</i>) | 5 (62.5) | Causing itchiness/ ' <i>bisa</i> ' Unsure |
| Sand goby (<i>Haruan</i>) | 13 (16.3) | Causing itchiness/ ' <i>bisa</i> '; previously uneaten Unsure |
| Tuna (<i>Tongkol</i>) | 60 (75.0) | Causing itchiness/ ' <i>bisa</i> ' Unsure |
| Spanish mackerel (<i>Tenggiri</i>) | 23 (28.8) | Unsure Causing itchiness/ ' <i>bisa</i> ' |
| Pomfret | 38 (47.5) | Causing itchiness/ ' <i>bisa</i> ' Unsure |
| Catfish (<i>Keli</i>) | 43 (53.8) | Causing itchiness/ ' <i>bisa</i> ' Unsure |
| Indian mackerel (<i>Kembung</i>) | 36 (45.0) | Causing itchiness/ ' <i>bisa</i> ' Unsure |
| Stingray | 54 (67.5) | Causing itchiness/ ' <i>bisa</i> ' |

| | | Unsure |
|--|---|--|
| Table 3 Two most mentioned reasons for restriction or prohibition of protein foods | Wolf herring (<i>Parang</i>) | 41 (51.3) Unsure Causing itchiness/ 'bisa' |
| | Threadfin (<i>Senangin</i>) | 24 (30.0) Unsure Previously uneaten |
| | Threadfin (<i>Kurau</i>) | 33 (41.3) Unsure Previously not eaten |
| | Malaysian river catfish (<i>Patin</i>) | 43 (53.8) Unsure Causing itchiness/ 'bisa' |
| | Anchovy | 18 (22.5) Causing itchiness/ 'bisa' Unsure |

Note: GIT - gastrointestinal tract

Only a small number of respondents avoided milk and dairy products during postpartum period. However, there are no definite reasons for the restriction as they are unsure of the reason and some of the foods have never been taken in their normal diet (Table 4). Table 5 illustrates the result for milk and dairy products food group.

| Protein foods | Prohibited (%) | Reason for restriction or prohibition |
|--|----------------|---------------------------------------|
| Hairtail scad (<i>Cencaru</i>) | 25 (31.3) | Unsure Causing itchiness/ 'bisa' |
| <i>Pelaling</i> | 32 (40.0) | Unsure Causing itchiness/ 'bisa' |
| Red snapper (<i>Merah</i>) | 31 (38.8) | Unsure Causing itchiness/ 'bisa' |
| Japanese threadfin bream (<i>Kerisi</i>) | 27 (33.8) | Causing itchiness/ 'bisa' Unsure |
| Jewfish (<i>Gelama</i>) | 24 (30.0) | Causing itchiness/ 'bisa' Unsure |
| Chicken | 39 (48.8) | Causing itchiness/ 'bisa' Unsure |
| Meat | 44 (55.0) | Unsure Causing itchiness/ 'bisa' |
| Legumes | 52 (65.0) | Unsure Hot/cold; GIT effects |

| | | | |
|--|------------------------|-----------|--|
| Table 4 Two most mentioned reasons for restriction or prohibition of protein foods - continued | Egg | 69 (86.3) | Causing itchiness/ 'bisa'; delay wound healing Unsure |
| | Soy bean | 37 (46.3) | Unsure Cold |
| | Soy bean cake (Tempeh) | 35 (43.8) | Cold Unsure |
| | Organs | 49 (61.3) | Unsure Causing itchiness/ 'bisa' |
| | Seafood | 74 (92.5) | Causing itchiness/ 'bisa' Unsure |

Note: GIT - gastrointestinal tract

| | Milk and dairy products | Prohibited (%) | Reasons for restriction or prohibition |
|---|-------------------------|----------------|---|
| Table 5 Reasons for restriction or prohibition of milk and dairy products | Milk | 7 (8.8) | Unsure; previously uneaten Causing itchiness/ 'bisa' |
| | Yogurt | 19 (23.8) | Unsure Previously uneaten |
| | Cheese | 25 (31.3) | Unsure Previously uneaten |

More than 50% of respondents agreed that soy sauce, chili sauce and tomato ketchup, and vinegar are prohibited food during postpartum period. Soy sauce is prohibited as it will cause the childbirth scar to 'darken' and 'not fairly healed'. Some relate prohibition of chilli sauce and tomato ketchup with GIT effects, particularly the chili sauce because of its spiciness. Meanwhile, foods that contain vinegar cannot be eaten due to its 'sharp' property which may be due to its sour taste. Consumption of salty and sweet foods needs to be controlled as to prevent future health problems such as diabetes mellitus and hypertension. Table 6 summarizes the reason for each seasonings and spices prohibition.

| Seasonings and spices | Prohibited (%) | Reasons for restriction or prohibition |
|-----------------------|----------------|--|
| Sugar | 15 (18.8) | Disease prevention Wound healing |
| Salt | 14 (17.5) | Disease prevention Wound healing |

| | | | |
|--|------------------------------|---|--|
| Table 6 Reasons for restriction or prohibition of seasonings and spices during postpartum period | Soy sauce | 43 (53.8) | Wound healing Causing itchiness/ 'bisa' |
| | Chili sauce & tomato ketchup | 43 (53.8) | Unsure GIT effects |
| | Black pepper | 6 (7.5) | Hot GIT effects; others; unsure; previously uneaten |
| | Vinegar | 64 (80.0) | Causing itchiness/'bisa' Previously uneaten |
| | Curry powder | 41 (51.3) | Unsure Hot |
| | White pepper | 17 (21.3) | Unsure Hot |
| Ginger | 7 (8.8) | Others GIT effects; unsure; previously uneaten | |

The table 7 shows list of various type of fruits. From the table, the most prohibited fruits are *duku/langsat*, jackfruit, pineapple and watermelon with percentage ranging from 85.0 - 96.3% of respondents saying these fruits should be avoided. Among the fruits that are considered permissible during confinement period are dates (15.0%), apple (40.0%), raisin (17.5%), orange (35.0%), banana (40.0%), prune (35.0%) and kiwi (46.3%).

In term of vegetables group (Table 8), less prohibited vegetables are *kangkung*, *petai*, *sayur pucuk*, brinjal, cabbage, bamboo shoot, legumes, cucumber, loofah, bean sprout, mushroom, *jantung pisang*, bitter gourd, turnip and lady's finger with percentage respondents saying "avoid" ranging from 50.0 - 73.8%. On the other hand, vegetables that less than 50% respondents saying "avoid" are lettuce (37.5%), broccoli (36.3%), spinach (38.8%), *kailan* (36.3%), radish (26.3%), *ulam raja* (35.0%), *daun selom* (36.3%) and *pegaga* (28.8%).

Table 9 shows ice (96.3%) and sugarcane drink (81.3%) is most prohibited thing to be consumed. Less prohibited drinks are tea (58.8%) and fruit juice (50.0%). 48.8% respondents avoid instant coffee while smaller number of respondents avoids coffee (21.3%), chocolate drink (7.5%) and malted drink (12.5%). In term of reasons of prohibition, ice, fruit juice and grass jelly drink are considered "cold", tea and coffee are believed to have GIT effects properties while sugarcane drink is considered "Sharp/Sour".

Reliability of the food list

Post-hoc analysis using Cronbach's Alpha which was performed on list of foods for each group of starchy foods, protein, milk and dairy product, fruits, spices, vegetable and drinks, produced

values of 0.839, 0.891, 0.727, 0.839, 0.567, 0.917 and 0.640 respectively. The acceptable value of alpha is in range of 0.7 – 0.95³³. From the results, food list for drinks and spices group has less reliability and low degree of internal consistency which might be due to lack of food items in that food group. Thus, more types of drinks need to be added to increase the food list reliability.

Cooking methods

Majority of the respondents said that boiling, steaming and, grilling are allowed during postpartum period. In contrast, cooking methods which involve the use of oil and coconut milk are not allowed during this period. Other than that, there are a few respondents who mentioned that deep-frying and stir-frying are allowed during postpartum period but with conditions such as using olive oil and frying with limited oil.

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| Fruits Group | Avoid (%) | Top reason |
|---------------------|-----------|---|
| Star fruit | 51 (63.8) | Unsure Hot/Cold |
| Papaya | 48 (60.0) | Hot/Cold Unsure |
| Dates | 12 (15.0) | Unsure Hot/Cold & Previously uneaten |
| <i>Ciku</i> | 51 (63.8) | Unsure Hot/Cold |
| <i>Duku/Langsat</i> | 68 (85.0) | Hot/Cold Unsure |
| <i>Durian</i> | 59 (73.8) | Hot/Cold Unsure |
| Apple | 32 (40.0) | Hot/Cold Unsure |
| Guava | 47 (58.8) | Hot/Cold Unsure |
| Raisin | 14 (17.5) | Unsure Hot/Cold & Previously Uneaten |
| Chinese pear | 43 (53.8) | Hot/Cold Unsure |
| Pear | 42 (52.5) | Hot/Cold Unsure |
| Orange | 28 (35.0) | Hot/Cold Unsure |
| Mango | 51 (63.8) | Unsure Hot/Cold |
| Jackfruit | 77 (96.3) | GIT effects Unsure |
| Pineapple | 75 (93.8) | Sharp/Sour Unsure |
| Banana | 32 (40.0) | Unsure Hot/Cold |
| Prune | 28 (35.0) | Unsure Hot/Cold |
| <i>Rambutan</i> | 55 (68.8) | Hot/Cold Unsure |
| Grape | 43 (53.8) | Hot/Cold Unsure |
| Watermelon | 68 (85.0) | Hot/Cold Unsure |
| Kiwi | 37 (46.3) | Unsure Hot/Cold |

Table 8
Reasons for restriction or prohibition of fruits

Table 9 Reasons for restriction of vegetables

| Vegetables group | Avoid (%) | Top reason | |
|-----------------------|-----------|-------------------|-----------------------|
| | | First | Second |
| <i>Kangkung</i> | 56 (70.0) | Hot/Cold | Unsure |
| <i>Pegaga</i> | 23 (28.8) | Hot/Cold | Unsure |
| <i>Petai</i> | 56 (70.0) | Unsure | GIT effects |
| <i>Sayur pucuk</i> | 49 (61.3) | Hot/Cold & Unsure | GIT effects |
| <i>Daun selom</i> | 29 (36.3) | Unsure | Hot/Cold |
| <i>Ulam raja</i> | 28 (35.0) | Unsure | Hot/Cold |
| Brinjal | 60 (75.0) | Hot/Cold | Unsure |
| Cabbage | 50 (62.5) | Hot/Cold | Unsure |
| Carrot | 22 (27.5) | Unsure | Hot/Cold |
| Radish | 21 (26.3) | Unsure | Hot/Cold |
| Mustard | 8 (10.0) | Hot/Cold | Unsure |
| Leaves | | | |
| <i>Kailan</i> | 29 (36.3) | Unsure | Hot/Cold |
| Spinach | 31 (38.8) | Hot/Cold | Unsure |
| Turnip | 44 (55.0) | Hot/Cold | Unsure |
| Bamboo shoot | 57 (71.3) | Hot/Cold | Poison/Itchy & Unsure |
| Legumes | 56 (70.0) | Hot/Cold | GIT effects |
| Broccoli | 29 (36.3) | Unsure | Hot/Cold |
| Cucumber | 59 (73.8) | Hot/Cold | Unsure |
| Bitter gourd | 40 (50.0) | Hot/Cold | Unsure |
| Loofah | 50 (62.5) | Hot/Cold | Unsure |
| <i>Jantung pisang</i> | 43 (53.8) | Hot/Cold | Unsure |
| Bean sprout | 52 (65.0) | Hot/Cold | Unsure |
| Lady's finger | 48 (60.0) | Unsure | Hot/Cold |
| Lettuce | 30 (37.5) | Hot/Cold | Previously uneaten |
| Mushroom | 46 (57.5) | Unsure | Hot/Cold |

GIT - Gastrointestinal tract

DISCUSSIONS

From this study, it was found that most of the respondents were housewives. This explains the educational background where most of them only completed their schooling in primary and secondary education. Some of the respondents have mentioned that they have lack of breast

milk production during postpartum period. This problem may have a relation with postpartum practices that involves food restrictions. Consequently, breast feeding success may be affected.

This study has showed the role of mother and mother-in-law in determining the observance of postpartum practices. It was supported by study among Malaysian Chinese women also indicated that mother and mother-in-law are the top reason for their adherence to postpartum practices (Chin et al., 2010). Furthermore, the information regarding postpartum practices is being shared widely and can be learnt easily with the advancement of technology as some of the respondents include books/magazines and internet as their sources of information.

In Chinese culture, postpartum women usually observe the practices for 30 to 40 days (Liu et al., 2006; Poh et al., 2005). From this study, it is found that the length for confinement period ranged between 40 to 365 days. Conforming to postpartum practices for one whole year is a very rare in Malay culture. Perhaps these women are practicing postpartum care more strictly than others.

Oily or fatty foods were avoided during this period. The rationale behind the prohibition may be that they need to keep their body in shape and avoid excessive weight gain. Our finding also supports a study that most tubers were considered 'windy' (Noor Aini et al., 1994). In addition, 73% of Chinese postpartum women mentioned yam as 'poisonous' food (Poh et al., 2005). Surprisingly, there were some respondents who did not know why a specific food such as kuey-teow needs to be avoided. This may be due to their lack of information as many respondents are going through postpartum confinement for the first time.

Some fish and seafood were prohibited because these foods were considered as food that will cause itchiness or '*bisa*'. Similar finding was shown by two studies where the participant in their studies considered the same foods as poison or '*bisa*' (Poh et al., 2005; Nor Aini et al., 1994). Study among Chinese postpartum women also found that sand goby fish (*haruan*) is encouraged during confinement (Poh et al., 2005). This may be due to increased awareness of its role and benefit in wound healing.

Restriction of red meat contradicts with finding among Chinese women where it was considered as 'hot' food²⁴. In Chinese culture, 'hot' food is encouraged during postpartum period. Moreover, the avoidance of egg contradicts with other cultures where egg is among the accepted foods during postpartum period (Kaewsarn et al., 2003; Poh et al., 2005). The belief that chicken is prohibited during this period is contrary with other studies where consumption of chicken is encouraged because it was thought to have healing power (Sein, 2012) and assist breast milk production and aid postpartum recovery (Kaewsarn et al., 2003). In comparison with restriction of salty foods, Myanmar women also restrict intake of food which can cause high blood pressure such as preserved salted fish (Sein, 2012).

Among the fruits that are considered permissible during confinement period are dates (15.0%), apple (40.0%), raisin (17.5%), orange (35.0%), banana (40.0%), prune (35.0%) and kiwi

(46.3%). In comparison with literature found, Liu *et al.* (2006) found that 78% of participants of study conducted never ate fruits during confinement period. Most prohibited fruits are similar with findings in Kuala Lumpur where watermelon, pineapple, jackfruit and star fruit (Poh et al., 2005). However, Malay mothers perceived papaya (60.0%) as less prohibited fruit compared to Chinese women prohibition of papaya (80.0%). Finding of well-accepted fruits such as orange, banana, prune, and kiwi is different compared to the same study except apple. It shows that Malay mothers and Chinese mothers similarly perceived apple as safe to be consumed during postpartum period. It is also stated that apple is a more acceptable fruit with 42% said it should be encouraged and eaten a lot. As for other fruits, the difference in terms of acceptance shows slight cultural difference. Other than that, jackfruit and pineapple are avoided because of "GIT effects" and "sharp/sour" reason respectively.

Results showing "Hot/Cold" property of food as the top reason aligned with a study in which most fruits and vegetables are "cold" in nature (Manderson, 1981). On the other hand, jackfruit is avoided is because of tendency to cause GIT effects. It is supported by a study that stated jackfruit may cause stomach upset (Laderman, 1983). Pineapple is considered as "sharp/sour" and it is supported by a study in Vietnam (Manderson, 1981).

Kangkung, beansprout, cucumber, cabbage, brinjal, lady's finger are considered most prohibited which is similar with results found among Chinese women in Kuala Lumpur (Poh et al., 2005). Lettuce and *kailan* are well accepted among Malay mothers as compared to Chinese mothers. In addition, Malay mothers perceived broccoli, spinach, *kailan*, radish, *ulam raja*, *daun selom* and *pegaga* is allowed during confinement. It shows that green leafy vegetables are well accepted as compared to other type of vegetables. *Petai* is believed to cause "GIT effects" because respondents perceived it as "windy", can cause bloating and stomach upset. Among the top reason of vegetables prohibited are due to "Hot/Cold" and "Unsure" reason. Other reasons are GIT effects that believed to be caused by eating legumes, *petai*, *sayur pucuk* while lettuce are because it is "previously uneaten". On the other hand, bamboo shoot is considered as "Poison/Itchy". Bamboo shoot was prohibited but the reason for it was never mentioned in one study (Sein, 2012).

Generally cold drink is avoided during confinement (Manderson, 1981). It is supported by finding that shows majority of respondents said that ice is prohibited. Tea is also prohibited because of its cold properties (Manderson, 1981; Laderman, 1987). Interestingly, coffee was regarded as "hot" but the results show difference in acceptance between coffee and instant coffee. Sugarcane drink is avoided because it is sharp and it is supported by a study by Manderson (1981).

As conclusion, comparison of prohibition of all types food items have no statistical significance between method of delivery, except for broccoli (p -value = 0.035). In describing this, 20 respondents (47.6%) who underwent normal delivery, voted "yes" while only 8 (21.1%) voted "yes" for broccoli underwent caesarean section. Here "yes" means the food is not

prohibited during confinement period while “no” indicates otherwise. Considering respondents who voted “unsure” from normal and caesarean are 11 (26.2%) and 12 (31.6%) respectively, there is significant difference of “no” answer between normal and caesarean delivery which are 11 (26.2%) and 18 (47.4%) respectively.

The restriction of cooking methods that involve the use of oil may indicate that oily and fatty foods are strictly observed as they want to cut down fat intake. Low fat diet may help them to regain their pre-pregnancy weight and maintain ideal weight. However, some respondents allow deep frying and stir-frying with olive oil. This may be due to some awareness that using olive oil is better than palm oil in terms of health and reduction of fat intake.

Statistical test on list of spices and seasonings showed a low alpha value. Possible factors that may contribute to low alpha value of spices and seasonings are low number of questions, poor interrelatedness between items or heterogenous constructs (Tavakol and Dennick, 2011).

Strengths and limitations

This study explores an extensive list of postpartum food taboos which to our knowledge no other studies had done before. Plus, it provides more details on the ‘reason’ why specific food items cannot be eaten during postpartum period. Among limitations of this study are:

- Only Malay women were included as the participants.
- There was no record of dietary intake assessment.
- The study was carried out on women who have just delivered their baby within few days after childbirth. Tiredness and wariness may affect respondents’ responsiveness and willingness to involve in this study. Plus, some mothers have limited knowledge on postpartum dietary taboos because they were first-time mothers.

CONCLUSION

In conclusion, Malay mothers adhere strictly to confinement dietary practices. Certain foods and beverages in all food groups were prohibited to be taken during confinement period. This study provides pattern of dietary proscriptions in which list of foods and beverages prohibited were identified. Up to date, 100% of interviewed Malay mothers, adhere to confinement practices with 65% of them confine for 44 days. Foods and beverages were avoided due to perceived harmful intrinsic nature such as windy, cold, sharp, itchy and many else. However, quite a number of respondents were unsure of the reason behind each food prohibition. This may be due to limited knowledge regarding postpartum dietary practice since majority of them was first-time mothers. Moreover, foods in all food groups were similarly avoided by respondents of this study, regardless whether they deliver their babies via normal or caesarean section.

Consequently, they may have very limited food choices. This may affect their nutritional status. Thus, a more balanced diet should be recommended for Malay mothers in confinement. The result of this research suggested that observance of traditional postpartum dietary practice is still widely prevalent among Malay women in this modern era. Therefore, this finding supports the main research objective.

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REFERENCE

- American Public Health Association. (2001). South Asia case study-India: Norms of maternal care in India and impact on utilization on maternal health services in the U.S.: <http://www.apha.org/ppp/red/indiaPostpartum.html> (Accessed 22-05-2013)
- Baie SH & Sheikh KA. (2000). *The wound healing properties of Channa striatus cetrimide cream – tensile strength measurement*. Journal of Ethnopharmacology, 71: 93-100. doi:10.1016/S0378-8741(99)00184-1
- Chin YM, Jaganathan M, Hasmiza AM, & Wu MC. (2010). *Zuo Yezi practice among Malaysian Chinese women: tradition vs modernity*. British Journal of Midwifery, 18 (3): 171-175. doi: <http://dx.doi.org/10.12968/bjom.2010.18.3.46918>
- Heh SS. (2004). *“Doing the month” and social support*. Fu-Jen Journal of Medicine, 2 (2): 11-17.
- Kaewsarn P, Molye W & Creedy D. (2003). *Traditional postpartum practices among Thai women*. Journal of Advanced Nursing, 41 (4): 358-366 doi: 10.1046/j.1365-2648.2003.02534.x
- Kim-Godwin YS. (2003). *Postpartum beliefs and practices among non-western cultures*. The American Journal of Maternal/Child Nursing, 28 (2): 74-80. doi: 10.1097/00005721-200303000-00006
- Laderman C. (1983). *Wives and midwives: childbirth and nutrition in rural Malaysia*. University of California, Berkeley.
- Laderman C. (1984). *Food ideology and eating behaviour: contributions from Malay studies*. Social Science Medicine, 19(5): 547-559. doi:10.1016/0277-9536(84)90050-9

- Laderman C. (1987). *Destructive heat and cooling prayer: Malay humoralism in pregnancy, childbirth and postpartum period*. *Social Science Medicine*, 25 (4): 357-365. doi: 10.1016/0277-9536(87)90274-7
- Ladinsky JL, Volk ND & Robinson M. (1987). *The influence of traditional medicine in shaping medical care practices in Vietnam today*. *Social Science & Medicine*, 25: 1105-1110. doi: 10.1016/0277-9536(87)90351-0
- Liu N, Mao L, Sun X, Liu L, Chen B, & Ding Q. (2006). *Postpartum practices of puerperal women and their influencing factors in three regions of Hubei, China*. *BMC Public Health*, 6 (274): 1-7. doi:10.1186/1471-2458-6-274
- Lundberg PC & Trieu Thi NT. (2011). *Vietnamese women's cultural beliefs and practices related to the postpartum period*. *Midwifery*, 27: 731-736. doi: 10.1016/j.midw.2010.02.006
- Manderson L. (1981). *Roasting, smoking and dieting in response to birth: Malay confinement in cross-cultural perspective*. *Social Science & Medicine*, 15(8): 509-520. doi:10.1016/0160-7987(81)90025-9
- Manderson L & Matthews M. (1981). *Vietnamese attitudes towards maternal and infant health*. *Medical Journal of Australia*, 1: 69-72
- Naser E, Mackey S, Arthur D, Kalinin-Yobas P, Chen H, Creedy DK. (2012). *An exploratory study of traditional birthing practices of Chinese, Malay and Indian women in Singapore*. *Midwifery*, 28: 865-871. doi: 10.1016/j.midw.2011.10.003
- Nor Aini MY, Hanafiah MS, Md Idris MN & Fatimah A. (1994). *Food taboos and its relationship to anemia among pregnant Women*. *Journal of Malaysian Society of Health*, 12 (1): 41-49
- Phongphit S & Hewison K. (1990). *Thai village life: cultural and transition in the Northeast*. Mooban Press, Bangkok.
- Pillsbury BLK. (1978). *"Doing the month": confinement and convalescence of Chinese women after childbirth*. *Social Science & Medicine*, 12 (1): 11-22. doi:10.1016/0160-7987(78)90003-0
- Poh BK, Wong YP, & Abdul Karim N. (2005). *Postpartum dietary intakes and food taboos among Chinese women attending maternal and child health clinics and maternity hospital, Kuala Lumpur*. *Malaysia Journal of Nutrition*, 11(1): 1-21.
- Pool R. (1987). *Hot and cold as an explanatory model: the example of Bharuch district in Gujarat, India*. *Social Science & Medicine*, 25 (4): 389-399. doi:10.1016/0277-9536(87)90277-2
- Raven JH, Qiyan C, Toulhurst RJ & Garner P. (2007). *Traditional beliefs and practices in the postpartum period in Fujian province, China: a qualitative study*. *BMC Pregnancy and Childbirth*, 7: 8. doi: 10.1186/1471-2393-7-8

- Rice PL. (2012). *Nyo dua hli – 30 days confinement: traditions and changed childbearing beliefs and practices among Hmong women in Australia*. Midwifery, 16: 22-34. doi: 10.1054/midw.1999.0180
- Sein KK. (2012). *Beliefs and practices surrounding postpartum period among Myanmar women*. Midwifery, 29(11): 1257-1263. doi: 10.1016/j.midw.2012.11.012
- Sich D. (2012). *Traditional concepts and customs on pregnancy, birth and postpartum period in rural Korea*. Social Science & Medicine, 15B: 65-69. doi:10.1016/0160-7987(81)90010-7
- Tavakol M & Dennick R. (2011). *Making sense of Cronbach's alpha*. International Journal of Medical Education, 2: 53-55. doi: 10.5116/ijme.4dfb.8dfd
- Wilson CS. (1973). *Food taboos of childbirth the Malay example*. Ecology of Food and Nutrition, 2(4): 267-274. doi: 10.1080/03670244.1973.9990347
- World Health Organisation (WHO). (2010). *Technical Consultation on Postpartum and Postnatal Care*. World Health Organisation: http://whqlibdoc.who.int/hq/2010/WHO_MPS_10.03_eng.pdf?ua=1. (Accessed 22-05-2013)