

THE PROPHETIC FOODS CONSUMPTION AMONG EXCLUSIVELY BREASTFEEDING MOTHERS IN KUANTAN, PAHANG: AN EXPLORATORY STUDY

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ABSTRACT

The World Health Organization (WHO) and United Nations Children's Fund (UNICEF) strongly advocate exclusive breastfeeding for the first six months after birth as the optimal way of feeding infants. Nutritional inadequacy during breastfeeding period may lead to breastfeeding problems such as inadequate milk production which is a common reason to early breastfeeding termination. Galactagogue is one of the solutions seek by breastfeeding mothers to overcome this problem. Within the topic of prophetic medicine, scholars discussed the foods consumed by Prophet Muhammad (P.B.U.H) and their health benefits. Among the plants mentioned in Islamic literature are *F.carica* (figs), *O.europea* (olive), *P.granatum* (pomegranate) and *N.sativa* (*habbatussauda*). Studies on prophetic foods consumption among lactating mothers is limited in the literature. Thus, the aims of this study to explore on prophetic food consumption, among Malay mothers during exclusive breastfeeding period. Ten subjects are interviewed by in-depth semi-structured interview guide. Inclusion criteria include Malay mothers aged 18 to 40 years, deliver full term babies and were exclusively breastfeeding. Audio-recorded interviews were transcribed verbatim in Malay and translated into English. Translated transcripts were then analysed thematically with the help of NVivo software. Thematic analysis revealed three themes that represents participants' knowledge, attitude and practice on prophetic foods consumption. The themes were 1) prophetic diet is related to Prophet Muhammad (P.B.U.H)'s practice on foods and eating manners, 2) perceived benefits and effectiveness of prophetic foods consumption, and 3) Practice of prophetic foods consumption during exclusive breastfeeding period. This study provides an insight to the understanding and perception on prophetic foods consumption during exclusive breastfeeding period among breastfeeding mothers. It is acknowledged that prophetic foods, particularly dates may have lactogenic function. Further studies should be carried out to investigate the relationship between prophetic foods consumption and lactogenic activity.

KEYWORDS: Human milk; Dietary status; Nutritional composition; Exclusive breastfeeding; Prophetic foods

INTRODUCTION

The World Health Organization (WHO) and United Nations Children's Fund (UNICEF) strongly advocate exclusive breastfeeding for the first six months after birth as the optimal way of feeding infants based on evidences which showed beneficial effect on child health, growth and development as well as positive implications on maternal wellbeing (WHO, 2009). The same recommendation is adopted by the Malaysian government as its Key Message 1 in its Malaysian Dietary Guidelines (MDG) for Children and Adolescents (Ministry of Health, 2013).

Dietary intake during lactation is a major determinant of nutritional status and depletion of nutrient stores during lactation. It poses a risk of malnutrition to the mothers and inadequate amounts of human milk can be a source of malnutrition for the infant. Nutritional inadequacy during breastfeeding period may lead to breastfeeding problems such as inadequate milk production which is a common reason to early breastfeeding termination. Galactagogue is one of the solutions seek by breastfeeding mothers to overcome this problem.

Galactagogue is define as pharmaceutical agents, foods, or herbal supplements used to support initiation, continuation, or augmentation of breast milk production (Zapantis et al., 2012). It is generally indicated for cases of separation of mother and infant in a time period, illness in mother or child, following adoption, immaturity of child, or restoration of milk supple after weaning (Low, 2009; Gabay, 2002).

Nowadays, information on herbal galactagogues are readily available through the internet, social media, support system, and health care professionals. It is estimated that 15% of breast-feeding women use herbal galactagogues such as milk thistle, *Torbangun*, and *Shatavari* (*Asparagus racemosus*) at some point (Zapantis et al., 2012; Abascal and Yarnell, 2008). Some women also believe certain foods consumed by the Prophet Muhammad P.B.U.H. such as dates, honey, blackseed and fenugreek to have beneficial effects in boosting their milk production.

Within the topic of prophetic medicine, scholars discussed the foods consumed by Prophet Muhammad (P.B.U.H) and their health benefits. Mushtaq et.al (2009) has enlisted the details of 32 plant species stated in Al-Quran, Al-hadith and Islamic literature. Among the plants mentioned are *F.carica* (figs), *O.europea* (olive), *P.granatum* (pomegranate) and *N.sativa* (*habbatussauda*). These plants are widely used for medicinal purposes such as to treat common colds, diabetes, and eczema, as functional foods i.e. to improve milk production and improving memory (Sheikh, 2016; Sakka et al., 2014; Ramadhan, 2007). In addition, these plants are also utilized in industrial products such as facial cleanser, acne treatment, and supplementary products.

Review so far found only one study in which a positive relationship between consumption of palm dates and quantity of human milk is showed (El Sakka et al., 2014). Other than that, breastfeeding mothers also consumed fenugreek in order to stimulate

lactation and showed positive result on breastmilk production (Tukyilmaz et al., 2011; Westfall, 2003). In addition, there are many claims of the benefits of these foods and herbs (including for breastfeeding) which have yet to be proven scientifically. These gaps warrant investigation. Thus, this study aims to explore on the prophetic foods consumption during exclusive breastfeeding period.

METHOD

This study was conducted in Kuantan, Pahang. Semi-structured interviews were used for data collection. Thematic analysis was adopted to derive the study's results.

Study participants

A total of 10 mothers were conveniently selected from our first phase of study. The inclusion criteria for the participants were Malay mothers aged 18 to 40 years, deliver full term babies, and exclusively breastfeeding at point of interview. The participants were briefed on the purpose of the interview, were assured that their participation was completely voluntary, and were guaranteed confidentiality.

Data collection

Individual, in-depth, face-to-face interviews were conducted to explore the knowledge, attitude, and practice on prophetic foods during the exclusive breastfeeding period among Malay mothers. Knowledge can be defined as the mothers' understanding about prophetic foods or prophetic diet. Attitude refers to their perception about prophetic foods consumption such as its perceived benefits or harm. Practice refers to the way in which the mothers demonstrate their knowledge and attitude on prophetic foods through their actions.

The interviews were conducted in Malay using an interview guide and recorded using a audio recorder with the permission of the participants. It varied in length between 30 to 40 minutes. The interviews were conducted at either participant's house or office at their convenience. Each participant was assigned with a code number (M1 to M10) to ensure anonymity. The questions asked revolved around these topics:

1. Understanding about prophetic foods
2. Giving examples prophetic foods
3. Reporting consumption of any prophetic foods during exclusive breastfeeding period
4. Providing the reasons for consuming the prophetic foods, if they do.

The interviews were transcribed verbatim in Malay. The transcription was later translated in English and back translated for accuracy.

Data analysis

The transcribed interviews were entered into NVivo software version 11. This software assists in organizing and analysing the qualitative information obtained from the interview with the participants. The interviews were transcribed into text within the same day of

interview to capture all verbal and non-verbal data. To ensure the verbatim accuracy, the interviewer transcribed the data. A thematic framework by Boytzis (1998) was used to classify and organize data according to key themes.

RESULT

The participants' age ranged between 26 to 39 years old. Three participants were housewives. All of them had undergone normal vaginal childbirth and had the intention to exclusively breastfeed their infant for at least 6 months. Only 2 participants were first-time mothers. Out of 10 participants, 2 of them had secondary education and 8 of them had tertiary education.

There were three key themes emerged from the interviews.

Theme 1: Prophetic diet is related to Prophet Muhammad (P.B.U.H)'s practice on foods and eating manners

Majority of the participants (6 out of 10) described prophetic diet as the foods which were consumed by Prophet Muhammad (P.B.U.H) such as dates, raisins and pomegranate. For example, these participants mentioned that:

"Foods that were practiced (consumed) by Rasulullah" (M7, age 33)

"What I know about prophetic diet, like eating dates..." (M4, age 33)

Other participants associate prophetic diet to the dietary practices which were encouraged in Islam such as consuming good foods and following the eating guidelines or *adab*.

"A good diet following the Sunnah" (M2, age 27)

"Prophetic diet is about the way we eat" (M3, age 26)

Theme 2: Perceived benefits and effectiveness of prophetic foods consumption

We further explored their reasons for prophetic foods consumption during breastfeeding period. It was found that there were three main purposes which were to follow the Sunnah, to provide energy and nutrients, and to boost breastmilk production.

"I consume firstly (because of) sunnah. Secondly, they can help to increase breastmilk" (M8, age 39)

"It's my effort to increase breastmilk" (M5, age 29)

"I consumed dates and raisins to provide extra energy. The nutrients are also good for the baby (through breast milk)" (M7, age 30)

Some participants shared their experience and observation on the quality and quantity of their breastmilk production after consumption of prophetic foods. The quality of the milk was described as it's consistency and colour of the milk, whereas the quantity was

quoted as the amount of breastmilk that they managed to pump in one cycle from both breast.

"If I eat (dates), usually I can get three bottles of milk. If I don't eat, it (milk) reduced into two bottles" (M1, age 33)

"If I didn't snack (dates) in the morning, the milk will look diluted. I can get 15 ounces of milk in one pump (after snacking on dates). If not, maybe around 7 to 8 ounces" (M4, age 33)

Theme 3: Practice of prophetic foods consumption during exclusive breastfeeding period

Only 2 out of 10 participants did not include prophetic foods during their breastfeeding period. Dates, raisins, honey, *habbatus sauda*, and milk were among the prophetic foods consumed by the rest of the participants. For example:

"I took dates every day, twice per day. Each time, three pieces" (M10, age 29)

"Yes, goat's milk everyday" (M4, age 33)

When the participants were asked about their sources of information on prophetic foods, personal reading (from books and internet websites), and family members were mentioned such as:

"(I got it) from internet. The rest are from (my) husband" (M4, age 33)

"through (my) reading (online)" (M2, age 27)

DISCUSSION

This study explored the knowledge, attitude and practice of prophetic foods among breastfeeding mothers during exclusive breastfeeding period. Majority of participants consumed palm dates (6 out of 10) during breastfeeding period. Other than that, raisins, honey, black cumin seed (*habbatus sauda*), and milk were among prophetic foods consumed by the participants. These were the foods which were commonly known among Muslims.

The participants of our study understood the concept of prophetic diet as either the foods or eating manners practiced by our Prophet Muhammad (P.B.U.H), or both. Although prophetic diet or foods is not generally used in literature, in general, the phrase '*Prophetic medicine*' reflects the words and actions of the Holy Prophet Muhammad (PBUH) with relation to disease, treatment of disease, and patients' care (Kasule, 2007). This also includes His words on medical matters, medical treatment practiced by others on the Prophet, medical treatments practised by the Prophet on himself and others, medical treatments observed by the Prophet with no objections, medical procedures that the Prophet heard or knew about and did not prohibit, or medical practices that were so common that the Prophet could not have failed to know about them. Scholars also discussed the foods consumed by the Prophet within this context. Thus, the term '*prophetic diet*' or '*prophetic foods*' were used to

specifically described Prophet's practices pertaining foods consumption and eating manners.

Abundance of literature were found on potential therapeutic use of foods and herbs mentioned earlier. For example, a review on the black seed concluded that it has antibacterial property, helps to reduce elevated glucose level, and have the ability to reduce oxidative stress (Ahmad *et al.*, 2013). In addition, olive particularly in form of oil have anti-hypertensive, anti-thrombic, antioxidant, anti-inflammatory and anti-carcinogenic property (Buckland and Gonzales, 2015). Other than that, its leaves contain bioactive compounds such as flavonoids and triterpenes that may prevents cardiovascular diseases and have antidiabetic properties (El & Karakaya, 2009).

However, there are very limited studies found on potential role of prophetic foods in breastfeeding. The most common herbal galactagogues found in the literature was fenugreek. A few studies have found the effectiveness of fenugreek as a galactagogue. For example, a study among Bataknese found that 600g capsule of fenugreek increases milk production by 20% (Damanik, Wahlqvist and Wattanapenpaiboon, 2006). Similar findings were found among women who consumed fenugreek tea (El Sakka *et al.*, 2014; Turkyilmaz *et al.*, 2011). However, none of our study participants mentioned about fenugreek as prophetic foods and none of them reported any experience related to fenugreek. This may be because fenugreek is more well-known as spices used in cooking rather than a galactagogue agent.

Only one participant consumed *Habbatus sauda* or black seed (*Nigella sativa*) during breastfeeding period. It was consumed for the purpose of improving breast milk production. From our literature, only one study was done to investigate the effectiveness of this food in rats (Hosseinzadeh *et al.*, 2013). The study concluded that *Nigella sativa* can stimulate milk production by increasing its volume up to 37.6%. Another study on herbal galactagogue uses among Malay women found that *habbatus sauda* were among the herbs used to improve breast milk production (Othman, Lamin, and Othman, 2014). However, they did not measure the effectiveness of the supplementation by measuring the volume of breastmilk produced. Instead, participants' experience after consuming herbal galactagogues were recorded as general findings.

Palm dates was the most commonly consumed among our study participants. They associated its consumption to their breastmilk quantity and quality performance. Our findings are supported by a study by El Sakka *et al.* (2014) where consumption of palm dates during breastfeeding among 25 participants had shown an improvement in terms of breast milk volume. In this study, 75 participants were assigned into three different groups (fenugreek tea, palm dates, and control group). The mean (67.8 ± 18.8) breast milk volume produced in the palm dates group is higher than fenugreek tea and control groups (50.8 ± 18.8 and 35.5 ± 7.0 , respectively).

Other than their function as galactagogue, three participants chose to consume prophetic foods such as dates and raisins to provide extra energy and nutrients for them. In addition, they also mentioned that the nutrients will go to the baby too through breast milk.

It is known that all foods contain energy and nutrients which are good for daily needs. Dates particularly contains a high percentage of carbohydrates (total sugars, 44-88%). It also contains 15 types of salts and minerals, 2.3-5.6% of protein, 0.2-0.5% of fats, and 6.4-11.5% of dietary fibre (Al-Shahib & Marshall, 2003). Thus, it is a good food for breastfeeding mothers to snack on.

It has been reported that maternal dietary intake has influence on breast milk composition (Chapman & Nommsen, 2012; Quinn et al., 2012; Su et al., 2010). Total proteins, total fats, saturated fatty acids (SFA), poly- (PUFA), and monounsaturated fatty acids (MUFA) were among the nutrients in human milk which were associated with maternal dietary intake (Bravi et al., 2016). From our interview, some participants can describe their breast milk appearance in terms of consistency and colour after they consumed prophetic foods. This may suggest that prophetic foods also have an influence on breast milk quality.

Nowadays, information is easily accessible through the internet. As our participants were all literate, this may explain the good awareness about prophetic foods consumption during breastfeeding period. The information may be obtained through search engines, and information sharing through social media networks such as Facebook and WhatsApp. Other than that, support from the family member, especially the husband also plays a role in incorporation of prophetic foods in their wife's daily dietary intake.

CONCLUSION

In conclusion, this study contributed a perspective on prophetic foods consumption during exclusive breastfeeding period. The knowledge and good awareness of breastfeeding mothers on prophetic foods consumption reflects the nature of a mother who wants the best for her baby. In addition, it is acknowledged that dates may have lactogenic function, besides fenugreek and black seed. Further studies should be carried out to investigate the relationship between prophetic foods consumption and lactogenic activity.

ACKNOWLEDGEMENT

This study is funded by IIUM Research Initiative Grants

REFERENCES

- Abascal, K. & Yarnell, E. (2008). *Botanical galactagogues*. *Alternative Complimentary Therapy*. 15 (1): 288-294
- Ahmad, A., Husain, A., Mujeeb, M., Khan, S.A., Najmi, A.K., Siddique, N.A., Damanhour, Z.A., & Anwar, F. (2013). *A review on therapeutic potential of Nigella Sativa: a miracle herb*. *Asian Pacific Journal of Tropical Biomedicine*. 3 (5): 337-352
- Boyatzis, R. (1998). *Transforming qualitative information: thematic analysis and code development*; Sage: Thousand Oaks, CA, USA
- Buckland, G. & Gonzales, C. (2015). *The role of olive oil in disease prevention: a focus on the recent epidemiological evidence from cohort studies and dietary interventional trials*. *British Journal of Nutrition*. 113: S94-S101
- Chapmann, D.J. & Nomsen-Rivers, L. (2012). *Impact of maternal nutritional status on human milk quality and infant outcome: An update*. *Advances in Nutrition: An International Review Journal*. 3 (3): 351-352
- Damanik., R., Wahlqvist, M.L., & Wattanapenpaiboon, N. (2006). *Lactagogue effects of Torbangun, a Batakese traditional cuisine*. *Asia pacific Journal of Clinical Nutrition*. 15 (2): 267-274
- El, S.N. & Karakaya, S. (2009). *Olive tree (Olea europaea) leaves: potential beneficial effects on human health*. *Nutrition Reviews*. 67 (11). 632-638
- Gabay, M. (2002). *Galactagogues: medications that induce lactation*. *Journal of Human Lactation*. 18 (3): 274-279
- Hosseinzadeh, H., Tafaghodi, M., Mosavi, M.J., & Taghiabadi, E. (2013). *Effect of aqueous and ethanolic extracts of Nigella sativa seeds on milk production in rats*. *Journal of Acupuncture and Meridian Studies*. 6 (1): 18-23
- Low, D.T. (2009). *The use of botanicals during pregnancy and lactation*. *Alternative Therapy*. 15 (1): 54-58
- Mushtaq A, Mir A. K, Sarfaraz K.M., Muhammad, Z., Muhammad A.K., Tamoor, H. and Shazia. S. (2009). *Useful medicinal flora enlisted in Holy Quran and Al-Hadith*. *American-Eurasian J. Agric. & Environ. Sci*. 5: 126-140
- National Coordinating Committee on Food and Nutrition (NCCFN). (2013). *Malaysian Dietary Guidelines for Children and Adolescents - Summary*. Ministry of Health Malaysia [online]: <http://www.moh.gov.my/images/gallery/GarisPanduan/MDG%20Children%20and%20Adolescents%20Summary.pdf> (Accessed 25-04-2016)
- Omar Hassan Kasule. (2007) *Tibbn Al-Nabawi*. Scibd: <https://www.scribd.com/document/58443210/TIBBN-AL-NABAWI> (Accessed 20-04-2016)

- Othman, N., Che Lamin, R.A., & Othman, C.N. (2014). *Exploring behaviour on the herbal galactagogue usage among Malay lactating mothers in Malaysia*. *Procedia-Social and Behavioral Sciences*, 153: 199-208
- Quinn, E.A., Largado, F., Power, M.L., & Kuzawa, C.W. (2012). *Predictors of milk composition in Filipino mothers*. *American Journal of Human Biology*, 24:533-540
- Ramadhan, M. (2007). *The Nutritional Value, Functional Properties and Nutraceutical Applications of Black Cumin (Nigella sativa L.): An Overview*. *International Journal of Food Science and Technology*, 42: 1208-1218.
- Sakka, A.E., Salama, M., and Salama, K. (2014). *The Effect of Fenugreek Herbal Tea and Palm Dates on Breast Milk Production and Infant Weight*. *Journal of Pediatric Sciences*, 6: e202
- Sheikh B.Y. (2016). *The role of prophetic medicine in the management of diabetes mellitus: A review of literature*. *Journal of Taibah University Medical Sciences*:
<http://dx.doi.org/10.1016/j.jtumed.2015.12.002> (Accessed 18-04-2016)
- Su, L.L., SK, T.C., Lim, S.L., Chen, Y., Tan, E.A.T., Pai, N.N et al. (2010). *The influence of maternal ethnic group and diet on breast milk fatty acid composition*. *Annals of the Academy of Medicine, Singapore*, 39 (9): 675-679
- Tukyilmaz, Canan, Esra Onal, & Ozden Turan. (2011). *The effect of galactagogue herbal tea on breast milk production and short-term catch-up of birth weight in the first week of life*. *Journal of Alternative & Complementary Medicine*. 17 (2): 139-142
- Westfall, R.E. (2003). *Galactagogue herbs: a qualitative study and review*. *Canadian Journal of Midwifery Research and Practice*. 2 (2): 22-27
- World Health Organization (WHO). (2014). *Comprehensive Implementation Plan on Maternal, Infant and Young Child Nutrition*. World Health Organization Publication [online]:
http://www.who.int/nutrition/publications/CIP_document/en/ (Accessed 25-04-2016)
- Zapantis, A., Steinberg, J.G., & Schilit, L. (2012). *Use of herbals as galactagogues*. *Journal of Pharmacy Practice*, 25 (2): 222-231