

KNOWLEDGE, ATTITUDE AND PRACTICES OF BREASTFEEDING AMONG  
PREGNANT MOTHERS ATTENDING OBSTETRICS AND GYNECOLOGY  
CLINIC, HOSPITAL UNIVERSITI SAINS MALAYSIA

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## DECLARATION

I hereby declare that the thesis is my original work except for the quotations and citations which have been duly acknowledged. I also declare that it has not been previously, and is not concurrently submitted for any other degree or purposes in Universiti Sains Malaysia or at any other institutions.


  
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SURAYA BINTI MAHUSIN

04<sup>TH</sup> JULY 2013

I certify that Ms SURAYA BINTI MAHUSIN has carried out her study entitled Knowledge, Attitude and Practices of Breastfeeding among Pregnant Mothers Attending Obstetric and Gynecology Clinic, Hospital Universiti Sains Malaysia as a final year research project in nutrition under my supervision. She has complied with the ethical standard and regulations in conducting her study and has completed writing her thesis. I am satisfied with her work and have no objection for the thesis to be examined by the appointed examiners by the School of Health Sciences, Universiti Sains Malaysia.

Thank you.

  
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04<sup>TH</sup> JULY 2013

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## **LIST OF SYMBOL, ABBREVIATION AND ACRONYMN**

BFHI	Baby Friendly Hospital Initiative
CB	Complementary Breastfeeding
EB	Exclusive Breastfeeding
EBM	Express Breast Milk
MDG	Millenium Development Goal
MOH	Ministry of Health
NHMS III	National Health and Morbidity Survey III
UNICEF	United Nation Children Fund
WHO	World health Organization

## **ABSTRAK**

### **Pengetahuan, Tingkahlaku dan Amalan Penyusuan Dalam Kalangan Ibu Mengandung di Klinik Obstetrik dan Ginekologi, Hospital Universiti Sains Malaysia**

Kajian pengetahuan, sikap dan amalan penyusuan susu ibu dalam kalangan ibu penting dalam mengekalkan budaya penyusuan di Malaysia. Kajian ini bertujuan untuk menilai tahap pengetahuan, sikap dan amalan penyusuan dalam kalangan ibu mengandung. Satu kajian keratan rentas telah dijalankan di kalangan ibu-ibu mengandung yang menghadiri Klinik Obstetrik dan Ginekologi, Hospital Universiti Sains Malaysia dengan menggunakan persampelan bertujuan. Seramai 153 responden telah melengkapkan borang soal selidik untuk dianalisis. Hasil kajian menunjukkan bahawa secara keseluruhan 76.5% ibu hamil telah mencapai tahap pengetahuan yang baik mengenai penyusuan. Kajian ini juga menunjukkan bahawa majority responden mempunyai pengetahuan yang baik mengenai faedah susu ibu kepada bayi dan ibu-ibu, makanan percuma, makanan yang berkesan, kolostrum, tempoh penyusuan dan pembengkakkan payu dara. Lebih separuh daripada responden mempunyai pengetahuan yang baik dalam aspek-aspek praktikal penyusuan (67.9%) dan masalah dengan

penyusuan (62.7%). Walau bagaimanapun, hanya 47% daripada responden mempunyai pengetahuan yang baik dalam aspek ekspresi susu ibu. Sumber-sumber utama maklumat penyusuan diperoleh daripada media massa (41.2%) dan melalui kelas antenatal di Hospital Universiti Sains Malaysia (26.8%). Hasil kajian menunjukkan bahawa 99.3% responden mempunyai sikap yang positif terhadap ibu. 38.6% responden mengamalkan penyusuan eksklusif dan 62.1% meneruskan penyusuan sehingga 2 tahun. Prevalens pernah menyusu adalah tinggi di kalangan 77.8% responden. Terdapat hubungan yang signifikan di antara pengetahuan dan sikap terhadap penyusuan ( $r = 0.338$ ,  $p < 0.05$ ). Walau bagaimanapun, tidak ada hubungan yang signifikan antara pengetahuan dan amalan penyusuan dan juga di antara sikap dan amalan penyusuan kerana nilai  $p > 0.05$ . Tahap pengetahuan yang baik mempengaruhi sikap ke arah penyusuan dan sesetengah amalan penyusuan manakala sikap pula tidak mempengaruhi amalan penyusuan.

## **ABSTRACT**

### **Knowledge, Attitude and Practices of Breastfeeding among Pregnant Mothers Attending Obstetric and Gynecology Clinic, Hospital Universiti Sains Malaysia**

The knowledge, attitude and practice of breastfeeding among mothers are crucial in the preservation of breastfeeding culture in Malaysia. This research aimed to assess the level of knowledge, attitude and practice of breastfeeding among pregnant mothers. A cross-sectional study was conducted among pregnant mothers attending the Obstetrics and Gynecology Clinics, Hospital Universiti Sains Malaysia using purposively sampling. There were 153 respondents who completed a set of self-administered questionnaires were included in the analysis. The findings showed that overall 76.5 % of pregnant mother had achieved level of good knowledge regarding breastfeeding. The study also showed that majority respondent had good knowledge about the benefits of breast milk to infants and mothers, complimentary feeding, effective feeding, colostrums, duration of breastfeeding and breast engorgement. More than half of the respondent had good knowledge in practical aspects of breastfeeding (67.9%) and problem with breastfeeding (62.7%). However, only 47% of the respondent had good knowledge in aspect of breast milk expression. The main sources of breastfeeding information were obtained from the mass media (41.2%) and through the antenatal class

at Hospital Universiti Sains Malaysia (26.8%). The results showed that 99.3% respondents had positive attitude toward breastfeeding. 38.6% of respondent practicing exclusive breastfeeding and 62.1% continued breastfeed up to 2 year. The level of practicing breastfeeding is high among 77.8% respondent. There was a significant association in between knowledge and attitudes toward breastfeeding ( $r=0.338$ ,  $p<0.05$ ). However, there was no significant association between knowledge and practice of breastfeeding and also in between attitude and practice of breastfeeding. Knowledge level is affecting the attitude toward breastfeeding and some types of breastfeeding practice while attitude does not affect the practice of breastfeeding.

## CHAPTER ONE: INTRODUCTION

### 1.1 Background of the study

Breastfeeding is the process whereby infant is feeding directly to the mother's breast (Keemer, 2011). Breast milk is the best food for babies (Adlina et al., 2006). It contains right amount of nutrients, in the right proportions for the growing baby (McVeagh, 2002). Various researches have proven that breastfeeding has enormous advantages not only to infants and mothers but also to the families and society. These include health, nutritional, immunologic, developmental, psychological, social, economic and environmental (Eidelman et al., 2005). Breastfeeding seems to have long-term benefits for children, such as lower mean blood pressure and total cholesterol as well as a lower prevalence of overweight and diabetes (Horta et al., 2007).

A reviews by Stuebe and Schwarz (2010) indicated that breastfed infants suffer less gastrointestinal infections and lower respiratory tract infections than formula-fed infants. These can influence mortality because diarrhea, pneumonia and malnutrition are the most common causes of infant death. It has been estimated that globally, 13 % of child deaths could be prevented by optimal breastfeeding (Jones et al., 2003). Early initiation and exclusive breastfeeding can save more than one millions babies. United Nations Children's Fund (UNICEF) recommends that children breastfeed exclusively for the first six months of life and then continues breastfeeding with adequate complementary food up to two years or beyond. No other food or drink, not even water, is usually needed for the first six months (UNICEF, 2008).

Breastfeeding may also have health benefits for mothers by increasing the level of oxytocin, resulting in less postpartum bleeding and more rapid uterine involution (Chua et al. 1994). Breastfeeding reduces a mother's risk to breast cancer which is the most common cancer in women (Stuebe & Schwarz 2010) and the mother's risk to suffer cardiovascular diseases (Schwarz et al., 2009)

Breastfeeding and proper infant feeding is also important to ensure the achievement of the Millennium Development Goal (MDG) in reducing infant mortality and children under 5 years by two thirds between 1990 and 2015 (Malaysia., 2012). In order to achieve global goal for optimal maternal and child health and nutrition, the Baby-Friendly Hospital Initiative (BFHI) was launched in 1991 by the World Health Organization (WHO) and UNICEF to ensure that all maternity facilities, whether free standing or in a hospital, became centers of breastfeeding support. A maternity facility could be designated "baby-friendly" when it did not accept free or low-cost breast milk substitutes, feeding bottles or teats, and had implemented 10 specific steps to successful breastfeeding (UNICEF, 2008).

The Ministry of Health of Malaysia had been exemplary in its pursuits of the BFHI accreditation. In March 1998, Malaysia was recognized by WHO as the only third country, after Sweden and Oman, to have successfully accredited all its government hospitals as Baby-Friendly Hospital. The efforts taken by our country have increased the breastfeeding rates showed that the importance of breastfeeding practices among mothers in Malaysia and also others country.

## **1.2 Problem Statement**

Breastfeeding practices in Malaysia are undergoing changes. Although many studies suggested the benefits of breastfeeding for both infants and mothers, the practice of breastfeeding, especially exclusive breastfeeding is still far below the standard recommendation. The prevalence of exclusive breastfeeding up to 6 month in 2006 was only 14.5% and only 37.4% of mothers continued breastfeeding for 2 years. Our country had lowest rate of exclusively breastfeeding among country of Southeast Asia.

According to Adlina et al (2006), there are some obstacles to the continuation of breastfeeding include physician apathy and misinformation, insufficient prenatal breastfeeding education, disruptive hospital policies, inappropriate interruption of breastfeeding, early hospital discharge, lack of timely routine follow-up care, postpartum home health visits, maternal employment, lack of broad societal support, media portrayal of bottle-feeding as normative and commercial promotion of infant formula through distribution of hospital discharge packs. All of this obstacle mainly can be tackling by good level of knowledge and positives attitudes of mother toward breastfeeding and also the good participation from the obstetricians, pediatrician and other concerned with maternity care. Health professionals also have key roles in promoting breastfeeding (Shwetal et al., 2012). Previous studies have shown that mothers who do not breastfeed or individuals who do not support breastfeeding have negative attitudes towards breastfeeding (Arora et al., 2000).

A number of studies have been conducted to assess breastfeeding practices in this country, but there is a lack of research that adequately assesses the knowledge, attitude, and practice of breastfeeding especially in assessing the relationship between level of knowledge, attitude and practices of breastfeeding among pregnant mother. So, this study aims to assess the knowledge, attitude and practices of breastfeeding among pregnant mothers attending Obstetrics and Gynecology Clinic, Hospital Universiti Sains Malaysia.

### **1.3 Objective of the Study**

To determine the relationship between knowledge, attitude and practice of breastfeeding among pregnant mothers attending Obstetrics and Gynecology clinic in Hospital Universiti Sains Malaysia.

#### **1.3.1 Specific objectives:**

- a) To determine the relationship between respondent's socio demographic characteristics with knowledge, attitude and practice of breastfeeding.
- b) To assess the knowledge regarding breastfeeding among pregnant mothers attending Obstetrics and Gynecology clinic in Hospital Universiti Sains Malaysia.
- c) To evaluate the attitude regarding breastfeeding among pregnant mothers attending Obstetrics and Gynecology clinic in Hospital Universiti Sains Malaysia.

- d) To identify the types of practices regarding breastfeeding among pregnant mothers attending Obstetrics and Gynecology clinic in Hospital Universiti Sains Malaysia.
- e) To determine the relationship between knowledge and attitude regarding breastfeeding among pregnant mothers attending Obstetrics and Gynecology clinic in Hospital Universiti Sains Malaysia.
- f) To determine the relationship between knowledge and practices regarding breastfeeding among pregnant mothers attending Obstetrics and Gynecology clinic in Hospital Universiti Sains Malaysia.
- g) To determine the relationship between attitude and practices regarding breastfeeding among pregnant mothers attending Obstetrics and Gynecology clinic in Hospital Universiti Sains Malaysia.

#### **1.4 Hypothesis**

- Null hypothesis,  $H_0$ = There is no association between respondent's socio demographic characteristics with knowledge, attitude and practice of breastfeeding.

Alternative hypothesis,  $H_A$ = There is an association between respondent's socio demographic characteristics with knowledge, attitude and practice of breastfeeding.

➤ Null hypothesis,  $H_0$ = There is no association between knowledge and attitude regarding breastfeeding among pregnant mothers attending Obstetrics and Gynecology clinic in Hospital Universiti Sains Malaysia.

Alternative hypothesis,  $H_A$ = There is an association between knowledge and attitude regarding breastfeeding among pregnant mothers attending Obstetrics and Gynecology clinic in Hospital Universiti Sains Malaysia.

➤ Null hypothesis,  $H_0$ = There is no association between knowledge and practice regarding breastfeeding among pregnant mothers attending Obstetrics and Gynecology clinic in Hospital Universiti Sains Malaysia.

Alternative hypothesis,  $H_A$ = There is an association between knowledge and practice regarding breastfeeding among pregnant mothers attending Obstetrics and Gynecology clinic in Hospital Universiti Sains Malaysia.

➤ Null hypothesis,  $H_0$ = There is no association between attitude and practice regarding breastfeeding among pregnant mothers attending Obstetrics and Gynecology clinic in Hospital Universiti Sains Malaysia.

Alternative hypothesis,  $H_A$ = There is an association between attitude and practice regarding breastfeeding among pregnant mothers attending Obstetrics and Gynecology clinic in Hospital Universiti Sains Malaysia.

## **1.5 Research Question**

- a) Does the socio-demographic data influence the knowledge, attitude and practice of breastfeeding?
- b) What do you know about breastfeeding?
- c) What is the attitude regarding breastfeeding among pregnant women?
- d) What are the types of practices regarding breastfeeding?
- e) Does the knowledge influence the attitude of breastfeeding?
- f) Does the knowledge influence the practices of breastfeeding?
- g) Does the attitude influence the practice of breastfeeding?

## **1.6 Significance of the Study**

Malaysian culture traditionally accepted breastfeeding as the normal and healthy way of nourishing a newborn child. With the introduction of Western culture, however, bottle-feeding was introduced and is now viewed as a 'modern' mother's way of providing nutrition to infants (Kang, 1999).

There are a lot of programs and policies that our government together with UNICEF and WHO plans in order to make sure mothers practicing breastfeeds to their infants. Many sources either from mass media or from health care providers that explain the advantages of breastfeeding and the way of practicing breastfeeding in order to give information for mothers. Although exclusives breastfeeding give variety of benefits to mothers and also to the infants, there are several factors that influence mothers' decision to not breastfeeds their infants. Fairbank et al. (2000) suggest that knowledge level and

mothers' attitude towards breastfeeding will influenced mother's practice of breastfeeding. Besides that it is important to understand attitudes toward infant feeding among mother, to identify appropriate ways of improving breastfeeding attitudes, and to determine requirements for the successful promotion of breastfeeding (Greene at al., 2003).

The study is done among pregnant mothers because the preparation of mothers before they give birth is fundamental to the success of exclusive breastfeeding (Ekambaram et al., 2010). This study was aimed to assess the knowledge, attitude and practice of breastfeeding among pregnant mothers attending Obstetrics and Gynecology clinic in Hospital Universiti Sains Malaysia. The knowledge, attitude and practice of breastfeeding among mothers are crucial in the preservation of breastfeeding culture in Malaysia and the results of these studies can used to improve health promotion on breastfeeding to mothers (Adlina et al., 2006).

## CHAPTER 2: LITERATURE REVIEW

### 2.1 Breastfeeding and Related Concepts

Breastfeeding means that a child receives breast milk from the mother's or from the wet nurse's breast or after it has been expressed (WHO, 1991). Breastfeeding knowledge refers to the facts that are known about breastfeeding. According to the dictionary, knowledge is information acquired by study and acquaintance with ascertained truths. Breastfeeding attitude refers to the way that an individual regards breastfeeding. According to Kang, Song and Im (2005), breastfeeding attitude is the conditions of readiness to a certain breastfeeding behavior. The other terms used in this study are:

1. Exclusive Breastfeeding means the infants has received only breast milk from his/her mother or wet nurse, or expressed breast milk and no other liquids or solids with the exception of drops or syrups consisting of vitamins, mineral supplements or medicine until six months (WHO, 1991).
2. Predominant Breastfeeding is defined as the infant's predominant source of nourishment has been breast milk. However, the infants may also have received water and water-based drinks such as sweetened and flavored water (WHO, 1991). Full Breastfeeding is constituted of exclusive breastfeeding and predominant breastfeeding (WHO, 1991).
3. Complementary feeding is the child has received both breast milk and solid or semi-solid food (WHO, 1991).

## 2.2 Rates of Breastfeeding

In Malaysia, based on National Health and Morbidity Survey III (NHMS III) 2006 the percentage of mothers practicing breastfeeding has increased from 88.6% in 1996 to 95%. However, due to various constraints and challenges, many of them were unable to continue practicing exclusive breastfeeding for six months (Fatimah et al., 2010). Only 14.5% of these mothers breastfeed their babies exclusively in the first six months. This is among the lowest percentage in the Southeast Asia region for that year (see Table 2.1). Although breastfeeding practices are high in our country, the percentage of exclusive breastfeeding is still low (MOH, 2006).

A research done in Jordan showed that the percentage of exclusively breastfeeding is 58%, mixed breastfeeding is 30.3 % and formula feeding is 11.4% (Khasawneh et al., 2006). While in Bangladesh, 77% mothers are exclusively breastfeed their infants (Haider et al.1997). According to MOH (2012), Malaysia is still in medium level in practicing exclusive breastfeeding compare to other country. Successful breastfeeding not only depends on a willing mother, father and support by health professionals but also on the knowledge and attitudes developed during adolescence and young adult stage (Kim et al., 2003). In Kelantan, based on statement from Kelantan Health Director, Datuk Dr Ahmad Razin Ahmad Mahir “ until now almost 90 per cent of mothers breastfeeds their infants in the early of birth and more than 50 per cent of mothers in Kelantan practicing exclusive breastfeeding but for only until four month olds. There should have some efforts in order to achieve targets for mothers to continue breastfeeds their infant until six month olds”. (Harian, 2012).

Table 2.1: Comparison of Exclusive Breastfeeding among Southeast Country.

Country	Year	% infants exclusively breastfed < 6 months
Malaysia	2006	14.5
Indonesia	2002/03	39.5
Philippines	2003	33.5
India	1999/98	46.8
Egypt	2003	30.4
Armenia	2000	29.5

Source: MOH, 2012

## 2.3 Benefits of breastfeeding

There are various benefits of breastfeeding. It gives short term benefits and potential long term benefits in breastfeed infants. In addition, the beneficial of breastfeeding is covered to maternal health as well as to the society, economic and environmental.

### 2.3.1 Benefits to infant

Breast milk plays an important role to infant's growth and development. It is because of the components in breast milk that exert two important roles which are to provide nutrition and to encourage immunity and development (Kramer et al., 2008). Breast milk changes its composition from colostrum to mature milk to meet the different stages of nutrition needs from newborns to older infant (Picciano, 2001). Breast milk

also contains a wide variety of components including antibodies, enzymes and hormones (Hamosh, 2001). The health benefits received by consuming breast milk cannot be replaced by formula milk.

Breast milk contain bioactive factors such as human secretory immunoglobulin A (sIgA), lactoferrin, lysozyme, oligosaccharide, growth factors and cellular components which give benefits to the infant's host defense system (Kleinman, 1979). There is also evidence that show breastfeeding reduces infant mortality and decrease the risk of acute illness such as gastrointestinal infections, lower respiratory tract disease and acute otitis media (Chung et al., 2007). In addition, there is systematic review concluded that breastfeeding is associated with lower rates of childhood obesity, certain allergic condition, type 2 diabetes and leukemia (Chung et al., 2007).

There are also some other potential long term benefits of breastfeeding for infants because of a number of studies have shown that breastfeeding is associated with positive effect on neurodevelopment. These effects exert because of the presence of long chain polyunsaturated fatty acids (PUFAs) in breast milk. The fatty acids, ecosapentanoic acid (Wilhelm, Rodehorst, Stepan, Hertzog, & Berens) and docosahexanoic acid (Chadha) present in breast milk may be responsible for advanced neurodevelopment (Dobson & Murtaugh, 2001). A meta analyses of 20 studies suggested that breastfeeding was associated with significantly higher cognitive development scores in infants (Anderson, Johnstone, & Remley, 1999).

### **2.3.2 Benefits to mother**

Breastfeeding is also beneficial for mothers, including decreased risks of type 2 diabetes, breast cancer (Möller et al, 2002), ovarian cancer (Rosenblatt & Thomas, 1993) and maternal postpartum depression (Chaudron et al., 2001). A cohorts study in the United States by Stuebe and colleagues (2005) found that, without a history of gestational diabetes, each additional year of breastfeeding was associated with a 4% reduction in the risk of developing type II diabetes in the first cohort and a 12% reduction in the risk in the second cohort. Furthermore, evidence from latest meta-analyses is breastfeeding associated with a reduction in breast cancer (Möller et al, 2002). It is a collaborative reanalysis study including more than 50000 women with breast cancer and more than 90,000 controls, examined individual data from 47 studies and found that the relative risk of breast cancer decreased by 4.3% for every 12 months of breastfeeding, in addition to a decrease of 7.0% for each birth (Möller et al, 2002).

In addition, frequent and exclusive breastfeeding can delay the return of fertility through lactational amenorrhea and act as a natural contraceptive (Kennedy et al, 1989). Breastfeeding is beneficial to the mothers in terms of promoting the release of hormones which make the uterus contract more quickly and reduce bleeding and anemia (Chua et al, 1994). Other than that, by practicing breastfeeding it helps mothers to early return to pre-pregnancy weight as fat accumulated during pregnancy is used to produce milk. It also provides long-term preventive effects such as less risk of breast cancer and osteoporosis (Newcomb et al., 1994). Additionally, breastfeeding creates emotional,

physiological and psychological bonds between mothers and children (Ball & Wright, 1999).

### **2.3.3 Benefits to society, economic and environmental**

Breastfeeding also offers benefits to the society, economic and environment. Infants who are exclusively breastfeed tend to have fewer health care visits, prescriptions and hospitalizations resulting in a lower total medical care cost compared to never breastfeed infants (Cohen et al, 1995). In addition, breastfeeding reduces the number of sick days that families must use to care for their sick children (Gribble, 2006). Breastfeeding requires no packaging, fuel or electricity for preparation as artificial food and it does not harm the environment (Chen, 2000).

## **2.4 Factors associated with breastfeeding**

There are many factors associated with the practice of breastfeeding including maternal knowledge and attitude (Kang et al., 2005), socio demographic characteristics (Lauer et al., 2004), and biomedical factors (WHO, 2009).

### **2.4.1 Knowledge and Attitude**

Losch and Dungy (1995) found that maternal attitudes were not only good predictors of choice between breastfeeding and formula among mothers, but also were important predictors of the duration of breastfeeding. People's attitudes have two components which are the knowledge and information they possess and the other is their feeling emotions and evaluation of what is important (Naidoo et al., 2000). Mothers with

accurate knowledge and positive attitudes toward breastfeeding will breastfeed their infants longer and have greater chances of success breastfeeding (Tarkka et al., 1999). On the contrary, mothers who are concerned about inconvenience, embarrassment and shame are more likely to practice bottle feed (Matthews et al., 1998).

#### **2.4.2 Demographic Characteristics**

Breastfeeding practices are influenced by socio demographic factors such as mother's age, educational status and employment status (Evers et al., 1998). In developed countries, maternal age is a key determinant of the breastfeeding practice. A study conducted in Canada found a positive association between breastfeeding practice and maternal age. Leung and colleagues also found that maternal age was significantly associated with initial breastfeeding (Leung et al., 2002).

Other than that, research data show that higher maternal education level associated with breastfeeding practice. A study done by Ameer and colleagues (2008) also found a significant association between mother's educational level and practice of breastfeeding. In addition, other factors that affect breastfeeding practiced were mother's occupational status. A study done by Khassawneh and friends (2006) and Ekambaram and colleagues (2010) had found correlation between mothers' occupational status with breastfeeding practice.

#### **2.4.3 Biomedical factors**

Almost all mothers can breastfeed their infants but there are only few contraindications of breastfeeding that recommend mothers to stop breastfeeding temporarily or permanently such as mothers with HIV infection or maternal medication

with sedating psychotherapeutic drugs (WHO, 2009). Besides that, breastfeeding difficulty was another significant factor that influence breastfeeding practice (Tengku Alina et al., 2013). The difficulties assessed were sore nipple, cracked nipple, difficulty latching on to the breast, perception of inadequate milk, perception of hungry infant, breast engorgement and emotional upset. Similarly, women who had pathological problems such as engorgement and cracked nipples were less likely to exclusively breastfed their infants for six months (Nkalaand & Msuya, 2011).

## **2.5 Knowledge, attitude, practices and relative determinants studies on breastfeeding in Malaysia and other countries.**

Several knowledge, attitude and practice (Nakar et al.) studies on breastfeeding have been conducted by researchers worldwide including in United States, Brazil, Singapore and Malaysia. These studies have been done among breastfeeding mothers, pediatricians, nurse practitioners, nurse midwives and medical students (Adlina et al., 2010). The results of these studies can be used to improve health promotion on breastfeeding to mothers at antenatal clinics by enhancing the interaction between breastfeeding mothers, families and pediatricians (Schanler et al 1999).

Breastfeeding practices were common among mothers with good knowledge on breastfeeding. In order for a mother to breastfeed her infants, adequate knowledge was needed. Study done in the United Kingdom showed significantly more mothers who attended the workshop focusing on knowledge, skills and attitude towards breastfeeding

would breastfeed and continue to do so after three months compared to the control group (Long, 1995).

A study on knowledge, attitudes and sources of information on breastfeeding among pregnant mothers was conducted at Selayang Hospital, Selangor by Ay Eeng and friends (200) found that out of 218 respondents, 74.8% were knowledgeable about breastfeeding with total score of more than 70%. They knew that colostrums and breast milk were the best food, good for resistance against disease and allergy, filling up stomach easily, helpful in teeth development and maternal recovery after birth, increased bonding, was easy and economical. They also found that high percentage of respondents (83.90%) showed positive attitude towards breastfeeding for examples, breastfeeding being easier than infant formula, had no negative effect on marital relationship or family care, would commence breastfeeding straight after delivery, agreeable to the banning of bottles and teats in hospital and they would not stop breastfeeding even if the husband discouraged them.

A recent study conducted in public university in Malaysia among medical students reported only 37.3% of the medical students had adequate knowledge concerning breastfeeding, while 62.7% of them had inadequate knowledge. More than half of the students, 57.1% had positive attitude towards breastfeeding while 42.9% of them showed negative attitude. As medical students are the future healthcare providers, it is important that breastfeeding management should be included in their course syllabus (Amalina et al., 2004). They also play an important role for successful breastfeeding promotion (Adlina, Narimah, Hakimi, & Mazlin, 2006).

In 1995, Yusof and colleagues conducted a study about infant feeding practices and attitudes of mothers in Kelantan towards breastfeeding. They found that the incidence of breastfeeding among 96 mothers who were attending various clinics at Universiti Sains Malaysia Hospital and Kota Bharu General Hospital was about 95%. The feeding patterns show that about 72% of mothers gave mixed feedings which is breast milk plus infant formula while only 30% gave exclusive breast milk to their infants in the first six months. About 64% of them who breastfed their child continued to do so beyond 6 months. Regarding their knowledge on breastfeeding, most mothers (98%) knew that breast milk is good for baby's health, economical, strengthens bonding between mother and child, and was sufficient for the sustenance of the baby. However, when asked about colostrums, 66% of mothers who breastfed their child threw away the colostrums before feeding. Some of the reasons given were that colostrums are dirty and not suitable for the baby's health and it might cause some diseases.

Another study done by Tan (2011) evaluated the practice, knowledge and attitude to breastfeeding and to assess factors associated with breastfeeding among women in Klang. The study was a cross-sectional study involving 220 women with infants aged six months from two randomly selected health clinics. The results from this study showed that 32.8% respondents practiced exclusive breastfeeding, mixed feeding was reported by 14.5% and infant formula feeding was reported by 52.7% of the respondents. This study found that Chinese women were more likely not to practice exclusive breastfeeding compared to Malay women while working women were more likely not to practice exclusive breastfeeding compared to non working. Study done by

Leong and friends (2009) also found that working women were more likely not to practice exclusive breastfeeding compared to non working women in Malaysia.

Several studies in others countries like Korea have shown that an increase in knowledge, attitudes and support for breastfeeding can originate from a comprehensive and thorough educational program with exposure to breastfeeding in the classroom (Leffler, 2000). The success of programs that promote breastfeeding may depend on a clear understanding of the attitudes that facilitate or hinder breastfeeding among the target population (Forrester et al., 1997).

A study was done in India by Ekambaram et al ( 2010) on postnatal mothers found that higher socio-economic status correlated with better breastfeeding scores. This could be because of the educational status of the mothers from higher socio economic class. 65.2% of the mothers with per capita income more than 1500 were graduates. They also found that women who had antenatal care from tertiary care centers and from private practitioners had better breastfeeding scores than those who had availed care from primary health center or health care worker. Lack of adequate information being given to mothers is a major factor responsible for low rates of exclusive breastfeeding and early initiation of breast feeding. Maternal education, socio-economic factors are also known to influence breastfeeding decision (Shwetal et al., 2012).

## **2.6 Baby-Friendly Hospital Initiative (BFHI)**

In 1991, UNICEF and WHO launched a global program, BFHI. This global movement aims to give every baby the best start in life by ensuring a health care environment where breastfeeding is the norm. It is based on the principles summarized

in a joint statement issued by the two organizations in 1989 on the role that maternity services should play in protecting, promoting, and supporting breastfeeding (WHO, 1994). To become truly baby-friendly, hospitals and maternity wards around the world are giving practical effect to the principles described in the joint WHO and UNICEF statement. These principles have been synthesized into Ten Steps To Successful Breastfeeding (see Table 2.2). Today, more than 20,000 hospitals in 156 countries are committed to the initiative and have received the baby friendly award (WHO & UNICEF, 2009).

Table 2.2: Ten Steps to Successful Breastfeeding

1.	Have a written breastfeeding policy that is routinely communicated to all health care staff.
2.	Train all health care staff in skills necessary to implement this policy.
3.	Inform all pregnant women about the benefits and management of breastfeeding.
4.	Help mothers initiate breastfeeding within half an hour of birth.
5.	Show mothers how to breastfeed, and how to maintain lactation even if they should be separated from their infants.
6.	Give newborn infants no food or drink other than breast milk, unless medically indicated.
7.	Practise rooming-in - that is, allows mothers and infants to remain together - 24 hours a day.
8.	Encourage breastfeeding on demand.
9.	Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants.
10.	Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.

Source: (WHO, 1998)

In March 1998, Malaysia was recognized by WHO as the third country to have successfully accredited all its government hospitals as Baby-Friendly Hospital. Until now, there are 138 Baby-Friendly Hospitals in Malaysia that consists of 126 government hospitals, 2 military hospitals, 2 university hospitals and 8 private hospitals (Malaysia., 2012). The hospital will practice the Ten Step of Successful Breastfeeding that introduced by WHO and UNICEF. It is hope that by having breastfeeding guidelines, the rates of breastfeeding can be improved. A studies done by Chan and Asirvatham (2001) showed that the breastfeeding practices were similar to those reported in other studies but the exclusive breastfeeding rate was higher. This might be due to the influence of the BFHI on breastfeeding. Antenatal breastfeeding education appeared to improve breastfeeding rates at 4 months. It would be useful to evaluate the impact of the BFHI on the infant feeding practices after it has been fully implemented and carried out for a certain period.

One of the Ten Steps to Successful Breastfeeding is initiation of breastfeeding within one hour of birth. Early initiation of breastfeeding within one hour provides benefits for both the baby and the mother.(WHO, 2003). According to WHO, the indicator for assessing breast feeding practices and timely initiation of breast feeding in the postnatal ward of the hospital was very low. The delay happened due to occurrence of too many deliveries in the labor room and the team of doctors and nurses gave priority to the shifting of mother to the indoor ward where they were finally motivated for early initiation of breast feeding. But this process of shifting use to take one hour leading to delay in timely initiation of breastfeeding and thus important time was missed. Therefore it is recommended that all mothers who deliver their babies in

hospital and are in labor room must be encouraged for the commencement of breastfeeding as early as possible preferably within one hour of delivery for better health of mother as well as child.

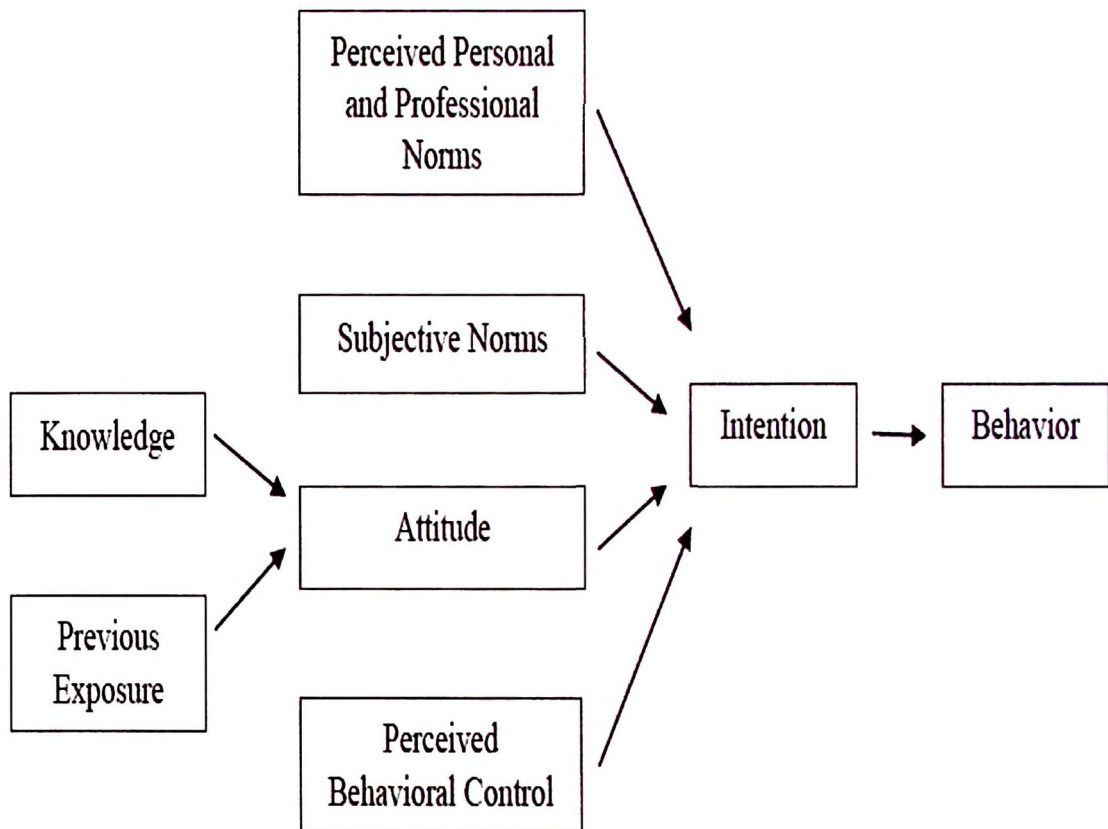
By adoption of the Ten Steps, it will enhance care for all women, whether they are breastfeeding or not. When it is properly implemented, mothers can favor informed decision making about infant feeding, individualized advice about infant feeding, humane care during labor and delivery, support for mothers after discharge and independence from commercial influences. Increasing the autonomy of mothers in the maternity unit is important for enhancing maternal competence and confidence after discharge (WHO, 1994). The BFHI and application of the principles synthesized in the Ten Steps To Successful Breastfeeding place babies and their care directly where they belong which is in the hands of their mothers (Saadeh & Akre, 1996).

## **2.7 Theoretical Framework**

The Theory of Planned Behavior (TPB) was used in this study. TPB was developed by Ajzen in 1988 and is an extension of the theory of reasoned action (TRA) (Ajzen, 1991). The theory proposes a model which can measure how human actions are guided and predicts the occurrence of a particular behaviour, provided that behaviour is intentional (Ajzen, 1991).

The model was outlined in Figure 2.1. The Theory of Planned Behavior proposed that a behaviour is immediately determined by the person's intention to perform or not perform the behavior (Daneault et al., 2004). Behavioural intention can be determined by attitudes, subjective norms, and perceived behavioural control (Daneault et al. 2004; Giles et al. 2007). The antecedents of attitude are previous experiences and knowledge (Dodgson & Tarrant, 2007). The future promotion and support of breastfeeding can be predicted by their intention to perform the behaviour, which is determined by their attitude toward the behaviour and is antecedent by their knowledge and exposure to breastfeeding.

This theory was used in this study to guide the research questions, the data collection process and the interpretation of the findings.



**Figure 2.1: Theory of Planned Behaviour**