

UNIVERSITI PUTRA MALAYSIA

ANTE- AND POST-NATAL KNOWLEDGE OF BREASTFEEDING AND ITS PRACTICE WITHIN SIX WEEKS OF POSTPARTUM PERIOD AMONG MOTHERS IN A PUBLIC HOSPITAL, SELANGOR, MALAYSIA

NURUL HIDAYU BINTI IBRAHIM

FPSK (m) 2020 1



ANTE- AND POST-NATAL KNOWLEDGE OF BREASTFEEDING AND ITS PRACTICE WITHIN SIX WEEKS OF POSTPARTUM PERIOD AMONG MOTHERS IN A PUBLIC HOSPITAL, SELANGOR, MALAYSIA



Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfilment of the Requirements for the Degree of Master of Science

COPYRIGHT

All material contained within the thesis, including without limitation text, logos, icons, photographs, and all other artwork, is copyright material of Universiti Putra Malaysia unless otherwise stated. Use may be made of any material contained within the thesis for non-commercial purposes from the copyright holder. Commercial use of material may only be made with the express, prior, written permission of Universiti Putra Malaysia.

Copyright © Universiti Putra Malaysia



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Master of Science

ANTE- AND POST-NATAL KNOWLEDGE OF BREASTFEEDING AND ITS PRACTICE WITHIN SIX WEEKS OF POSTPARTUM PERIOD AMONG MOTHERS IN A PUBLIC HOSPITAL, SELANGOR, MALAYSIA

By

NURUL HIDAYU BINTI IBRAHIM

May 2020

Chairman : Associate Professor Soh Kim Lam, PhD

Faculty: Medical and Health Sciences

Introduction: Breastfeeding (BF) is the normal way of feeding a newborn. Exclusive breastfeeding (EBF) is defined as providing breast milk to the infant. It is known as the feeding option with the most advantages for infants. Even though the benefits of EBF towards mothers and infants are well-established, the rate of EBF is still not encouraging. To promote and sustain EBF practices, the Breastfeeding Hospital Initiatives (BFHI) was launched by World Health Organization (WHO) and United Nation Children Emergency Funds (UNICEF) in 1991. Malaysia has been accredited as the third country in the world that successfully practises BFHI in almost all the government hospitals. One crucial step in the implementation of BFHI is to provide all the antenatal mothers with sufficient breastfeeding knowledge to enable them to practise EBF. Objective: The aim of this study is to study the antenatal knowledge on breastfeeding and its practice within six week of postpartum period among mothers in antenatal clinic in a public hospital, Selangor. Method: A total of 348 antenatal mothers were recruited in a cross-sectional study conducted in an antenatal clinic of a public hospital in Malaysia. Knowledge on breastfeeding was identified using pre- and post-test questionnaires. In each participants answered ten questions related questionnaire, the breastfeeding. In addition, phone calls were made within six weeks to monitor the practice of breastfeeding in the postpartum period. Descriptive analysis was conducted and its association with certain factors were determined using Chi-Square analysis and binary logistic regression analysis. A p-value of less than 0.05 is considered as statistically significant in the study. Result: The percentage of participants that scored good knowledge increased from 79.3% (pre-test) to 81.9% (post-test). Out of 330 participants that being followed-up, 67.6% practice EBF within six weeks of postpartum period and 68.4% of them was having good knowledge on BF. The result also showed that multipara had

1.712 times the odds to practice EBF compare to primipara (p<0.05) and non-working mothers were 1.778 more likely to EBF compare to working mothers. Furthermore, most mothers were likely to not practising EBF their babies Conclusion: It is important for antenatal mothers to receive information regarding breastfeeding to increase their awareness about its benefits. Informing mother regarding breastfeeding and its management in BFHI plays an important role in educating antenatal mothers on the benefits and management of EBF. The EBF education should also include techniques such as hands-on practical to encourage the successful adoption of EBF for the newborn among working mothers.



Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Master Sains

PENGETAHUAN ANTE- DAN POS-NATAL MENGENAI PENYUSUAN SUSU IBU DAN PRAKTISNYA DALAM TEMPOH ENAM MINGGU BERPANTANG DALAM KALANGAN IBU-IBU DI HOSPITAL AWAM, SELANGOR, MALAYSIA

Oleh

NURUL HIDAYU BINTI IBRAHIM

Mei 2020

Pengerusi : Profesor Madya Soh Kim Lam, PhD Fakulti : Perubatan dan Sains Kesihatan

Pengenalan: Penyusuan susu ibu adalah cara normal untuk menyusukan bayi baru lahir. Penyusuan susu ibu secara eksklusif ditafsirkan sebagai pemberian susu ibu kepada bayi. Pemberian susu ibu secara eksklusif mendatangkan banyak faedah kepada bayi. Walaupun kebaikan susu ibu kepada ibu dan bayi adalah diketahui umum, kadar penyusuan susu ibu secara eksklusif masih tidak memberangsangkan. Untuk menggalakkan dan mengekalkan praktis penyusuan secara eksklusif, Inisiatif Hospital Rakan Bayi (HRB) telah dilancarkan oleh WHO dan UNICEF pada tahun 1991. Malaysia telah diiktiraf sebagai negara ketiga di dunia yang berjaya melaksanakan HRB di hampir kesemua hospital kerajaan. Langkah terpenting untuk memastikan kejayaan HRB adalah melalui penyampaian pengetahuan berkaitan penyusuan susu ibu yang mencukupi bagi membolehkan mereka mempraktiskan penyusuan susu ibu secara eksklusif. Objektif: Kajian ini bertujuan untuk mengkaji tahap pengetahuan tentang penyusuan susu ibu semasa antenatal dan amalanya dalam masa enam minggu tempoh berpantang. Kaedah: Sejumlah 348 ibu antenatal direkrut dalam kajian keratan rentas yang dilakukan di klinik antenatal hospital awam di Malaysia. Pengetahuan mengenai penyusuan susu ibu dikenal pasti menggunakan soal selidik pra dan pasca ujian. Dalam setiap soal selidik, para peserta menjawab sepuluh soalan yang berkaitan dengan penyusuan susu ibu. Sebagai tambahan, panggilan telefon telah dibuat dalam masa enam minggu untuk memantau amalan penyusuan susu ibu dalam tempoh selepas bersalin. Analisis deskriptif dilakukan dan kaitannya dengan faktor-faktor tertentu ditentukan dengan menggunakan analisis Chi-square dan regresi logistik binari. Nilai p kurang dari 0.05 dianggap signifikan secara statistik dalam kajian ini. Dapatan: Peratusan peserta yang mendapat pengetahuan yang

baik meningkat dari 79.3% (pra-ujian) menjadi 81.9% (pasca-ujian). Dari 330 peserta yang ditindaklanjuti, 67.6% berlatih penyusuan secara eksklusif dalam tempoh enam minggu selepas bersalin dan 68.4% daripadanya mempunyai pengetahuan yang baik mengenai penyusuan susu ibu. Hasilnya juga menunjukkan bahawa multipara mempunyai 1.712 lebih kemungkinan untuk berlatih penyusuan secara eksklusif berbanding primipara dan ibu yang tidak bekerja mempunyai 1.778 lebih kemungkinan untuk mengamalkan penyusuan susu ibu secara eksklusif berbanding ibu-ibu yang bekerja. Kesimpulan: Adalah mustahak bagi ibu antenatal untuk menerima maklumat mengenai penyusuan untuk meningkatkan kesedaran tentang manfaatnya. Memberi maklumat kepada ibu mengenai penyusuan dan pengurusannya dalam BFHI memainkan peranan penting dalam mendidik ibu antenatal mengenai faedah dan pengurusan penyusuan susu ibu secara eksklusif. Pendidikan penyusuan susu ibu juga harus merangkumi teknik seperti praktikal langsung untuk mendorong kejayaan penyusuan susu ibu secara eksklusif untuk bayi baru lahir di kalangan ibu yang bekerja.

ACKNOWLEDGEMENTS

In the name of Allah S.W.T, Most Gracious and Merciful. With the selawat and salam to Prophet Muhammad SAW.

Praise to Allah S.W.T for all His blessings and guidance who bless me with wisdom, commitment, and strength for He who is Ever All-Powerful and All-Wise. Finally, this study that conducted at Obstetrics and Gynaecology Clinic, Hospital Serdang, Selangor was successfully completed.

I would like to express a million thanks to my husband, my parents and siblings who always provide me with love and support. My greatest gratitude goes to my supervisor, Assoc. Prof. Dr. Soh Kim Lam who guides me thoroughly and sincerely. Her assistance and support have enabled my research study run smoothly and successfully. I would also like to thank to my co-supervisors, Ms Salimah bt Japar and Dr. Ong Swee Leong for their great support and guidance.

My hearties thanks go to Pn. Wan Shakira bt Rodzlan Hasani from Institut Kesihatan Umum and Pn. Noorazlinda Yacob from Hospital Melaka with all the patience to teach and check the statistical part of the thesis.

A special appreciation to Dr Zainab bt Yahya, Head of Department, Obstetrics and Gynaecology, Hospital Serdang for allowing me to run the study in the O&G clinic. Last but not least, a million thanks to Pn. Rohani bt Mamat and Pn Noor Azzaralina bt Zahari, sisters in-charged of O&G clinic who have directly and indirectly given me assistance, support and encouragement throughout this study and also very supportive during the data collection. Thank you for all of your contributions, teamwork and cooperation in the commencement of this study and throughout data collection period. Thank you all for your support and guidance.

I certify that a Thesis Examination Committee has met on 8 May 2020 to conduct the final examination of Nurul Hidayu binti Ibrahim on her thesis entitled "Ante- and Post-Natal Knowledge of Breastfeeding and its Practice within Six Weeks of Postpartum Period among Mothers in a Public Hospital, Selangor, Malaysia" in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Master of Science.

Members of the Thesis Examination Committee were as follows:

Nor Afiah binti Mohd Zulkefli, PhD

Associate Professor Faculty of Medicine and Health Sciences Universiti Putra Malaysia (Chairman)

Rosita binti Jamaluddin, PhD

Associate Professor Faculty of Medicine and Health Sciences Universiti Putra Malaysia (Internal Examiner)

Dariah Mohd Yusoff, PhD

Senior Lecturer School of Health Sciences Universiti Sains Malaysia Malaysia (External Examiner)

ZURIATI AHMAD ZUKARNAIN, PhD

Professor Ts. and Deputy Dean School of Graduate Studies Universiti Putra Malaysia

Zw

Date: 03 September 2020

This thesis was submitted to the Senate of the Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Master of Science. The members of the Supervisory Committee were as follows:

Soh Kim Lam, PhD

Associate Professor Faculty of Medicine and Health Science Universiti Putra Malaysia (Chairman)

Salimah Japar, MPhil

Lecturer
Faculty of Medicine and Health
Science Universiti Putra Malaysia
(Member)

Ong Swee Leong, PhD

Senior Lecturer
Faculty of Medicine
Universiti Sultan Zainal Abidin
(Member)

ZALILAH MOHD SHARIFF, PhD

Professor and Dean School of Graduate Studies Universiti Putra Malaysia

Date: 10 September 2020

Declaration by graduate student

I hereby confirm that:

- this thesis is my original work;
- quotations, illustrations and citations have been duly referenced;
- this thesis has not been submitted previously or concurrently for any other degree at any institutions;
- intellectual property from the thesis and copyright of thesis are fully-owned by Universiti Putra Malaysia, as according to the Universiti Putra Malaysia (Research) Rules 2012;
- written permission must be obtained from supervisor and the office of Deputy Vice-Chancellor (Research and innovation) before thesis is published (in the form of written, printed or in electronic form) including books, journals, modules, proceedings, popular writings, seminar papers, manuscripts, posters, reports, lecture notes, learning modules or any other materials as stated in the Universiti Putra Malaysia (Research) Rules 2012;
- there is no plagiarism or data falsification/fabrication in the thesis, and scholarly integrity is upheld as according to the Universiti Putra Malaysia (Graduate Studies) Rules 2003 (Revision 2012-2013) and the Universiti Putra Malaysia (Research) Rules 2012. The thesis has undergone plagiarism detection software

Signature:	Date:	

Name and Matric No: Nurul Hidayu binti Ibrahim, GS43622

Declaration by Members of Supervisory Committee

This is to confirm that:

- the research conducted and the writing of this thesis was under our supervision;
- supervision responsibilities as stated in the Universiti Putra Malaysia (Graduate Studies) Rules 2003 (Revision 2012-2013) were adhered to.

Signature:	
Name of Chairman	
of Supervisory	
Committee:	Associate Professor Dr. Soh Kim Lam
Signature:	*************
Name of Member	
of Supervisory	
Committee:	Salimah Japar, MPhil
Signature:	
Name of Member of Supervisory	
Committee:	Dr. Ong Swee Leong

TABLE OF CONTENTS

		P	age
APPROV DECLAR LIST OF LIST OF	AK WLEDO /AL RATION TABL FIGUF	ES	i iii v vi viii xiii xiv xv
CHAPTE	R		
1	INTRO	DDUCTION	1
•	1.1	Introduction	1
	1.2	Background	1
	1.3		4
	1.4	Objectives of the Study	5 5 5 5
		1.4.1 General objective	5
		1.4.2 Specific objectives	5
	1.5	Research questions	
	1.6	Hypotheses	6 6
		1.6.1 Breastfeeding	6
		1.6.2 Exclusive breastfeeding	6
		1.6.3 Baby-Friendly Hospital Initiative	6
		1.6.4 Pre-test knowledge on breastfeeding	6 7 7
		1.6.5 Post-test knowledge on breastfeeding	7
		1.6.6 Six weeks of the postpartum period	7
		1.6.7 Antenatal mothers	7
			′
		1.6.8 Sociodemographic characteristics in relation to	7
		breastfeeding	7
	/	1.6.9 Confidence level towards breastfeeding	8
	1.7	Significant	8
	1.8	Chapter summary	10
2	LITER	RATURE REVIEW	11
	2.1	Introduction	11
	2.2	Health benefits of breastfeeding	11
	2.3	Implementation of Baby-Friendly Hospital Initiatives	
		(BFHI)	13
	2.4	Knowledge on breastfeeding among antenatal	. •
	∠ .¬	mothers	15
	2.5	Health education on breastfeeding for antenatal	13
	۷.5	_	15
	2.6	mothers Practice of breastfeeding among postportum methors	13
	2.6	Practice of breastfeeding among postpartum mothers	40
		following breastfeeding talk	18

	2.7 2.8 2.9 2.10	Factors associated to knowledge of breastfeeding Factors associated to the practice of breastfeeding Theoretical and conceptual framework Chapter summary		
3	METH 3.1 3.2 3.3 3.4	, 5	28 28 28 30 31 31	
	3.5 3.6 3.7 3.8 3.9	Instrumentation 3.5.1 Tool one (1) – Pre-test 3.5.2 Tool two (2) – Post-test 3.5.3 Tool three (3) – Follow-up Variables scoring method Data analysis Data collection methods Chapter summary	32 32 33 34 35 35 39	
4	4.1 4.2 4.3 4.4		40 40 40 41 41 41	
	4.5	Practice of breastfeeding within six weeks of the postpartum period 4.5.1 Distribution of sociodemographic and antenatal characteristics of participants during follow-up phone calls 4.5.2 Distribution of exclusive breastfeeding practice	44 44	
	4.6	within the six weeks of postpartum period Relationship between sociodemographic and antenatal characteristics towards exclusive breastfeeding practice within the six weeks of postpartum period 4.6.1 Association between sociodemographic characteristics towards exclusive breastfeeding practice within the six weeks of postpartum period	45	

		4.6.2 Association between antenatal characteristics towards exclusive breastfeeding practice within the six weeks of postpartum period	49
	4.7	Predictor influencing exclusive breastfeeding practice	
	4.8	among mothers Chapter summary	50 51
5	DISC	USSION	52
	5.1	Introduction	52
	5.2	Sociodemographic characteristics	52
	5.3	Breastfeeding knowledge	53
	5.4	Practice of breastfeeding within six weeks of	
		postpartum period	54
	5.5	Association of exclusive breastfeeding practices on	
		several factors	56
	5.6	Implication of the study	60
	5.7	Chapter Summary	62
6	SUM	MARY, GENERAL CONCLUSION AND	
_		OMMENDATIONS FOR FUTURE RESEARCH	63
	6.1	General conclusion	63
	6.2	Strengths	64
	6.3	Limitation	64
	6.4	Recommendations	64
		6.4.1 Nursing education	64
		6.4.2 Nursing practice	66
		6.4.3 Nurses	66
		6.4.4 Breastfeeding mothers	67
	G E	6.4.5 Nursing research	67
	6.5	Chapter summary	67
REFE	RENC	ES	68
	NDICE		79
BIOD	ATA O	F STUDENT	114
PURI	ICATIO	ON .	115

LIST OF TABLES

Table		Page
2.1	Contents of the ten steps to successful breastfeeding by World Health Organization (2018)	14
4.1	Descriptive of sociodemographic and antenatal characteristic among mothers in antenatal clinic, Hospital Serdang	41
4.2	Knowledge of breastfeeding based on the pre-test	41
4.3	Analysis of each question in pre-test	42
4.4	Level of breastfeeding knowledge based on the pre-test	43
4.5	Knowledge of breastfeeding based on the post-test	43
4.6	Level of breastfeeding knowledge based on the post-test	43
4.7	Distribution of sociodemographic and antenatal characteristics of participants during follow-up phone calls	44
4.8	Infant feeding outcomes	45
4.9	Exclusive breastfeeding practice within six weeks of postpartum period	45
4.10	Knowledge on breastfeeding*Exclusive breastfeeding practices	46
4.11	Reasons for not exclusive breastfeeding within six weeks of postpartum period	48
4.12	Association between sociodemographic characteristics with EBF practice among mothers	49
4.13	Association between antenatal characteristics with EBF practice among mothers	50
4.14	Distribution of predictors influencing exclusive breastfeeding practice within the six weeks of postpartum period among mothers	51

LIST OF FIGURES

Figure Pag		
2.1	Modified theory of planned behaviour by Wambach (1998)	24
2.2	Conceptual framework of the current study	26
3.1	Location of Hospital Serdang	29
3.2	Trend of fertility rate in Malaysia from 2012 to 2016	30
3.3	Total fertility rate of selected countries in 2016	30
3.4	Flow chart of data collection	37
3.5	The flow of follow-up data collection via phone calls during the six weeks of the post-partum period	38
4.1	Summary of EBF practice according to timeline after giving birth	46
5.1	Conceptual framework of the study – based on literature	61
5.2	Conceptual framework of the study – based on findings	62

LIST OF ABBREVIATIONS

BF Breastfeeding

BFHI Baby-Friendly Hospital Initiative

EBF Exclusive breastfeeding

FM Formula milk

IPH Institutes of Public Health

IQ Intelligence quotient

LR Logistic regression

NHMS National health and morbidity survey

SIDS Sudden infant death syndrome

TPB Theory of planned behaviour

UNICEF United Nations Children's Fund

WHO World Health Organization

CHAPTER 1

INTRODUCTION

1.1 Introduction

This chapter briefly describes the background of the study. It provides a detailed description of the problem statement, significance of the study, research objectives, research questions, research hypotheses, and definition of terms used in the study.

1.2 Background

Breastfeeding (BF) is the normal way of feeding a newborn. All pregnant mothers will be blessed with breast milk from the seventh months of their pregnancy journey. BF is defined as giving the breast milk to the infant and known as the most advantages feeding option for infants (Balogun et al., 2015). Exclusive breastfeeding (EBF) as defined by World Health Organization (WHO), is the way of giving an infant a breastmilk only without any additional food or drink for at least six (6) months old of life (WHO, 2009) and continued, with safe and adequate complementary foods, up to two (2) years and beyond (WHO, 2018).

Human milk is a species-specific that cannot be compared to any other substitutes' milk. It is not part of body fluid but it is secreted from mammary glands inside women's breasts (Anatolitou, 2012). Human milk contains numerous types of nutrients such as proteins, lipids, carbohydrates, minerals, vitamins and trace elements that promotes health to infant (Anatolitou, 2012) Human milk is also known to be the best and optimal nutritional and feeding option for the infant which is highly beneficial feeding to ensure child health and survival (Brown et al., 2014).

By giving breast milk exclusively to infants, it has been proven to reduce the rate of child mortality (WHO, 2017^a, WHO, 2017^b). Furthermore, BF is also an important, long-lasting and cost-effective intervention that reduces infants' morbidity and mortality (Asemahagn, 2016; Patterson, Olson & Keuler, 2016). In 2013, as many as 6.3 million children under the age of five died globally (Asfaw, Argaw, & Kefene, 2015). While the main cause of death was not reported to be directly due to the lack of BF, Victoria et al. (2016) claimed that the practice of BF could prevent as high as 823,000 annual deaths among children under the age of five globally.

Infants who are breastfed are protected from common childhood illnesses such as diarrhoea, pneumonia (Anatolitou, 2012; Salone, Vann, & Dee, 2013), and medical illnesses such as Diabetes Mellitus Type I and II (WHO, 2017^b). Breast milk also promotes sensory and cognitive development (Binns, Lee, & Low, 2016). In addition, children who were breastfed more than 6 months were found to have a lower risk of being diagnosed with autism spectrum disorder (Bar, Ruth & Andrew, 2016).

The benefits of BF also extend to the mothers who are practicing BF. Exclusive breastfeeding can help mothers to improve their health status by spacing the pregnancies (WHO, 2009). Its effectiveness as a natural method of family planning is as high as 98% (WHO, 2017^a). In addition, breastfeeding mothers are less likely to be overweight or obese (WHO, 2017^b). The practice of BF can also help to reduce the risk for chronic diseases such as Diabetes Mellitus Type I and II, hypertension, cardiovascular disorders and hyperlipidaemia (WHO, 2017^b; Binns et al., 2016). Breastfeeding practice was reported to reduce up to 20,000 annual deaths from breast cancer (Victoria et al., 2016).

Even though the benefits of BF towards mothers and infants have been well-established, the rate of EBF is still not encouraging. According to WHO (2018), the percentage of babies under 6 months old being exclusively breastfed was only 41% globally. This figure fell short of the Global Nutrition Target 2025 (50%) and Global Target 2030 (70%). According to Malaysian National Health and Morbidity Survey 2016 (NHMS 2016), only 47.1% of Malaysia populations were breastfed their babies up to 6 months old (Institute for Public Health, 2016).

Many studies have been conducted to examine the factors affecting the BF practices among mothers. Studies have established that certain barriers affected EBF practices within the first six months. Mothers who were working (Babakazo et al., 2015; Brown et al., 2014; Adlina & Siti Norjinah, 2015), mothers with lactation problems (Brown et al., 2014), primigravida (Tan, 2009^a) and mothers with insufficient milk were more likely to wean off EBF earlier than others (Saied et al., 2013; Draman et al., 2017; Rosuzeita et al., 2018).

To overcome these challenges faced by mothers during BF, it is crucial to provide the necessary education to increase EBF practice among them. Mothers who attended formal education on BF were four times more likely to breastfeed their baby (Lenja et al., 2016). It is also important that the content of the education should be conveyed and reinforced to mothers so that they can be well-equipped to deal with any arising issues (Luerer & Misskey, 2015). In addition, information on BF can increase the intention and confidence level for mothers to practice EBF. Furthermore, healthcare professionals should also conduct promotional campaigns on BF that target family members to raise

awareness about the importance of BF and to empower them on ways to overcome the barriers of BF (Saied et al., 2013).

In 1991, WHO and United Nations Children's Fund (UNICEF) launched the Baby-Friendly Hospital Initiative (BFHI) globally. After the implementation of BFHI, the awareness level of EBF in most of the healthcare facilities around the world increased (Mbada et al., 2013). The core content of BFHI consists of ten steps of successful BF. The content is used as an important guideline to ensure that EBF practice is the preferred choice of mothers.

Under BFHI, WHO and UNICEF had introduced ten steps of successful BF, namely (1) Have a written BF policy that is routinely communicated to all healthcare staff, (2) train all healthcare staff with the skills necessary to implement this policy, (3) inform all pregnant women about the benefits and management of BF, (4) help mothers to initiate BF within one hour of birth, (5) show mothers how to BF and maintain lactation, even if they need to be separated from their infants, (6) give newborn infants no food or drink other than breast milk, unless medically medicated, (7) practice rooming-in that allows mothers and infants to remain together 24 hours a day, (8) encourage BF on demand, (9) give no artificial teats or pacifiers to BF infants, and (10) foster the establishment of BF support groups and refer mothers to them on discharge from the hospital (WHO, 2017).

Among these 10 steps, step three (3) is the focus of this study. This step is highly recommended due to the importance of BF education during the antenatal period (WHO, 2018). In our local setting, most of the healthcare facilities have implemented the BFHI as recommended (Rasadiba et al., 2018). However, the approaches of BFHI implementation was found to be different within health facilities. The only common approach shared by all the healthcare facilities was the slide presentation during the lectures (Hospital Serdang, 2018).

A study conducted in one of the government hospitals in Kelantan revealed that prenatal BF education alone was not enough in sustaining EBF practices up to six months old of infant life (Rosuzeita et al., 2018). Other beneficial information including BF skills in relation to latching, positioning, and realistic expectation regarding BF benefits and challenges should be delivered as information like these have been found to be effective in influencing mother' decision on sustaining EBF practices (Luerer & Misskey, 2015; Aloysius & Jamaludin, 2015; Muda et al., 2018).

Aside from providing antenatal BF education, the support given during postpartum period was also found to be critical in promoting EBF practices, especially within the 4 weeks after delivery (Rosuzeita et al., 2018; World Health Organization, 2014). Diji et al. (2016) stated that a lack of support from

society on BF practices significantly reduced the EBF rate within six months of infants' life. Therefore, healthcare providers should provide continuous support, especially during postpartum period, to ensure that new mothers can overcome BF challenges and prolong the period of EBF practices.

1.3 Problem statement

The BFHI is a global effort which involves 160 countries. Most of the countries are developing nation such as Malaysia. Malaysia has been implementing BF support since 1992. However, the overall prevalence of EBF practice among mothers with infants below six months of age is still below target. The prevalence rate declined from 49.4% in 2015 (Rosuzeita et al., 2108; Institute for Public Health, 2016) to 47.1% in 2016, less than half of newborn population (Institute for Public Health, 2016). Globally, only 40% of infants under 6 months of age were given EBF (WHO, 2017^b).

Various approaches have been undertaken such as group counselling, peer counselling, and formal education on BF to promote the EBF practice (Ismail et al., 2012^a; Ismail et al., 2013). However, the rate of EBF is still not at par the minimum required of Global Nutrition Target 2025. Educating the mothers has been proven to be an effective intervention in increasing the maternal knowledge of BF (Rosuzeita et al., 2018; Draman et al., 2017). However, the delivery process of BF knowledge was only based on lectures and slide presentation. There was no standard care that followed. A systematic review by Lumbiganon et al. (2016) found that the provision of BF booklet and consultation was found to be effective to improved maternal practice towards EBF compared to the standard practice.

The rate of EBF practices up to six months was unsatisfactory in Malaysia as reported in NHMS 2016 (Institute for Public Health, 2016). Even though the initiation rate of BF among mothers were as high as 65.3% the EBF practices dropped to 47.1% by six months. In a recent study in Kelantan, the EBF practice in six months was only 27.3% (Rosuzeita et al., 2018). The low percentage of EBF practice was most likely due to the various challenges encountered by mothers during BF and the lack of support for them to overcome these challenges, especially during the postpartum period.

The importance of providing support for postpartum mothers was emphasised by Witt, Bolman, & Kredit (2016). The implementation of post-discharge BF management, especially on engorgement was very limited. They reiterated the need for anticipatory engorgement advice and continuous outpatient support from healthcare professional for BF. This is due to breast engorgement often peak at day five (5) of the postpartum period and this may lead to early cessation of EBF practice. Therefore, support especially during the postpartum period is crucial to overcome these problems.

In addition, formula milk (FM) is a very popular option to replace BF. It might be convenient but it can also be associated with long-term negative outcomes. The use of FM might result in many mothers ceasing BF sooner than intended and before the recommended period (Thomas-Jackson, Bentley & Keyton, 2015). Therefore, the healthcare providers, especially the nurses need to emphasise the advantage of BF and thoroughly explain the disadvantages of FM while delivering the BF talk.

1.4 Objectives of the Study

1.4.1 General objective

The general objective is to study the antenatal knowledge on breastfeeding and its practice within six weeks among mothers in the antenatal clinic in a public hospital, Selangor.

1.4.2 Specific objectives

- 1. To determine sociodemographic (age, education level, employment status) and antenatal characteristics (number of parity, knowledge on breastfeeding, maternal confidence level on breastfeeding) among mothers in the antenatal clinic in a public hospital, Selangor.
- 2. To determine the level of knowledge of breastfeeding among mothers in the antenatal clinic in a public hospital, Selangor.
- 3. To determine the practice of breastfeeding within the six weeks of postpartum period among mothers in the antenatal clinic in a public hospital, Selangor.
- 4. To determine associated factors (sociodemographic and antenatal) towards exclusive breastfeeding practice among mothers in the antenatal clinic in a public hospital, Selangor.
- 5. To determine predictors influencing exclusive breastfeeding practice among mothers in the antenatal clinic in a public hospital, Selangor.

1.5 Research questions

- 1. What are the sociodemographic (age, education level, employment status) and antenatal characteristics (number of parity, knowledge on breastfeeding, maternal confidence level on breastfeeding) among mothers in the antenatal clinic in a public hospital, Selangor?
- 2. What is the level of knowledge of breastfeeding among mothers in the antenatal clinic in a public hospital, Selangor?
- 3. What is the level of knowledge of breastfeeding among mothers in the antenatal clinic in a public hospital, Selangor?

- 4. What are associated factors (sociodemographic and antenatal) towards exclusive breastfeeding practice among mothers in the antenatal clinic in a public hospital, Selangor?
- 5. What are the predictors influencing exclusive breastfeeding practice among mothers in the antenatal clinic in a public hospital, Selangor?

1.6 Hypotheses

- 1. There is a significant association between sociodemographic and antenatal characteristics towards exclusive breastfeeding practice among mothers in the antenatal clinic in a public hospital, Selangor.
- 2. There is a significant probability of a predictors is associated with the exclusive breastfeeding practice among mothers in the antenatal clinic in a public hospital, Selangor.

Definition of terms

1.6.1 Breastfeeding

Breastfeeding (BF) is the ideal way of providing young infants with the nutrients they need for healthy growth and development (WHO, 2009). In this study, BF mothers refer to mothers who had ever breastfed their baby and had the intention to breastfeed the upcoming baby.

1.6.2 Exclusive breastfeeding

According to WHO (2018), EBF means that infant receives only breast milk with no other liquids or solids, not even water, except for oral rehydration solution, or drops/syrups of vitamins, minerals or medicines. In this study, EBF is defined as feeding the infant with only breast milk from the time the infant is being born until six weeks postpartum period.

1.6.3 Baby-Friendly Hospital Initiative

Baby-Friendly Hospital Initiative (BFHI) is a global programme sponsored by WHO and the UNICEF, and supported by the Ministry of Health, Malaysia (Ibrahim, 2014). In this study, the BFHI setting is Hospital Serdang.

1.6.4 Pre-test knowledge on breastfeeding

Pre-test is a preliminary test administered to determine a baseline knowledge or preparedness for a person to gain educational experience (Yourdictionary, 2020). In this study, pre-test knowledge on BF refers to knowledge experienced by one based on previous practice. This knowledge will be measured by using a pre-test questionnaire. The total mark of the question will be calculated and divided into two categories; good or poor knowledge. Participants who score more than six marks are classified as having good knowledge and vice versa.

1.6.5 Post-test knowledge on breastfeeding

Post-test is a test given after a lesson given to determine the lesson learned (Yourdictionary, 2020). In this study, post-test knowledge on BF refers to knowledge after attending the Prenatal BF Talk. This knowledge will be measured using a post-test questionnaire. The total mark of the question will be calculated and divided into two categories; good or poor knowledge. Participants who score more than six marks are classified as having good knowledge and vice versa.

1.6.6 Six weeks of the postpartum period

The postpartum period is from the end of labour until the time when the genital tract has returned to normal. It lasts for 42 days (Division of Family Health Development, 2013). The care for both mother and newborn from delivery up to 42 days after birth should include clinic follow-up and home visits by healthcare professionals (UNICEF, 2017). In this study, phone calls will be made to mothers during the 40th-44th days after delivery to follow-up on her practice of BF.

1.6.7 Antenatal mothers

Antenatal mothers refer to mother that was confirmed pregnant (Borhan, 2019). In this study, antenatal mothers are all pregnant mothers who attended BF Talk in the Antenatal Clinic, Hospital. The gestational age should not be less than 30 weeks.

1.6.8 Sociodemographic characteristics in relation to breastfeeding

The term sociodemographic is a combination of sociological and demographic characteristics which refer any involvement of social and demographic factors (Stone, 2016). Sociodemographic characteristics in social sciences involve

variables such as age, gender, sexual orientation, race, religion, income, marital status, birth rate, death rate, education level, employment status and socioeconomic status. However, in this study only selected sociodemographic characteristics will be tested to identify the strongest predictors that might influence BF practices. The selected sociodemographic characteristics were age, parity, educational level and employment status.

1.6.9 Confidence level towards breastfeeding

Confidence in self is usually affected by two themes namely 'to feel comfortable, be relaxed' and 'feeling secure' (Haavardsholm & Nåden, 2009). BF confidence describes a woman's belief or expectation that she possesses the knowledge and skill to successfully breastfeed her infant (Chezem, Friesen, & Boettcher, 2006). In the current study, BF confidence was referring to the mothers' belief in practising BF after being provided with the knowledge, and skills regarding BF. The confidence level was divided into two categorized named good and mild level of confidence towards breastfeeding practice.

1.7 Significant

The findings from this study can be used to determine the importance of improving BF knowledge to increase the EBF practice among mothers. The significance of this study can be reflected in a few areas encompassing nursing education and practice, nurses, and clinical services.

Nursing education and practice

The findings of the current study will be able substantiate the effect of formal education on BF on EBF practices. The study will also provide positive benefits in terms of what needs to be included in nursing education such as hands-on practical on handling problems during lactation and method to express breast milk in preparation to return to work to ensure the objective of BF can be achieved. In addition, the study can also serve as a reliable tool or guideline on the best method to apply while delivering the information during formal education of BF. The knowledge gained can boost the confidence of healthcare providers while giving education. The findings can also be used by educators and researchers to design new methods in improvising nursing education concerning BF.

Aside from providing lectures on BF, a practical session is also an important in promoting BF education to mothers. Clinical skills on techniques of BF, positioning, cues of the infant to feed, and management during lactation are crucial. Therefore, this study also provides positive and significant information to be used in nursing practice on dealing with challenges faced by mothers during BF. The study will also identify the best method to increase the BF rate

among mothers among the different sources of information such as printed information, video, peer counselling and lactation counselling. In addition, this study also emphasises on the importance of nursing skills towards handling BF challenges and providing support to BF mothers at different time-frames within the postpartum period.

Nurses

In term of BF practices, many studies have reported that the practice is influenced by certain sociodemographic characteristics, maternal mood, and mothers returning to work (Thomas-Jackson et al., 2015). Therefore, healthcare providers especially nurses should focus on these areas and provide the relevant information and support, especially during the postpartum period.

Identifying the factors that influence BF practices will increase awareness of healthcare providers on the issues faced by BF mothers. This will allow healthcare providers especially nurses to provide an effective and better-focused health education to sustain EBF practice for a longer period. Based on the findings of this study, nurses should focus on ensuring good and continuous support to the BF mothers to help them overcome any problems faced during BF, especially during the postpartum period. Nurses can also encourage mothers to make use of social support networks and BF peer support groups to discuss relevant topics.

Breastfeeding mother

Primigravida mothers were more likely to wean off BF earlier than others as shown in several studies (Brown et al., 2014; Asfaw et al., 2015; Babakazo et al., 2015; Ogbo et al., 2016). Any interventions aimed at improving BF practices should provide strong psychological support that boost maternal confidence while practicing BF to sustain BF practice. A longer period of BF is beneficial to mothers and infants as it has been proven to reduce the rate of morbidity and mortality among under-five children (Asemahagn, 2016; Patterson et al., 2016).

Returning to work is also found as one of the factors which may lead to the early cessation of BF practices (Al Juadi, Binns, & Giglia, 2014; Brown et al., 2014; Luerer & Misskey, 2015). Therefore, BF education should also emphasis on the preparation of the mothers to perform EBF after they return to work. This effort is necessary to improve the intention and confidence of mothers on BF especially in the aspect of expressing and storing breast milk.

1.8 Chapter summary

The background of this study was discussed in this chapter. Previous studies have suggested some associations between BF knowledge of antenatal mothers and EBF practices. It was also shown that, in some studies that BF knowledge affected EBF practices, especially within the first 6 months of infants' life. This research aims to find out the levels of BF knowledge pre- and post-Prenatal BF Talk, the practice of EBF within the six weeks of the postpartum period, any significant difference between BF knowledge before and after the BF talk, and if there is any association between this knowledge and EBF practice.

This significance of the study was also presented in this chapter. A few areas can be improved before completing this study. Formal education on BF implemented by most the healthcare facilities needs to be strengthened with a specific guideline to improve its effectiveness in providing continuous support towards EBF mothers.

REFERENCES

- Adah, R. O., John, C., Okpe, S. E., & Okolo, S. N. (2017). Awareness of the benefits of breastfeeding among mothers and its influence on the breastfeeding practices in Jos. *Jos Journal of Medicine*, 11(2): 47-52.
- Adlina S. & Siti Norjinah A.M (2015). World Breastfeeding Trends Initiative (WBTi). Assessment Report 2015.
- Agatha, F., Gigi, L., & Lisa, B. S. (2018). Breastfeeding in a baby friendly hospital: Preliminary findings. *Obstetrics & Gynaecology*, 131: 1111-1112, doi:10.1097/01.AOG.0000533478.01041.0d.
- Alfaleh K. M. (2014). Perception and knowledge of breast feeding among females in Saudi Arabia. *Journal of Taibah University Medical Sciences*, 9(2): 139-142.
- Al Juadi D. A. M., Binns C. W., & Giglia R. C. (2014). Breastfeeding in Saudi Arabia: a review. *International Breastfeeding Journal*, 9(1): 1-9. .doi: 10.1186/1746-4358-9-1.
- Aloysius, M., & Jamaludin, S. S. S. (2015). A conceptual study of breastfeeding and postpartum mothers: A Malaysian perspective. *Proceedings of Universiti Sains Malaysia*. 71-78. eISBN 978-967-11473-3-7.
- Anatolitou, F. (2012). Human milk benefits and breastfeeding. *Journal of Paediatric and Neonatal Individualized Medicine (JPNIM)*, 1(1): 11-18.
- Arsyad, S. M., Khani-jeihooni, A., Moradi, Z., Kouhpayeh, S. A., Kashfi, S. M., & Dehghan, A. (2017). Effect of theory of planned behavior in pregnant women in Fasa City, Iran. *Journal of Education Community Health*, 4(2): 55-63. doi: 10.21859/jech.4.2.55.
- Asemahagn, M. A. (2016). Determinants of exclusive breastfeeding practices among mothers in azezo district, northwest Ethiopia. *International Breastfeeding Journal*, 11(1): 22.
- Asfaw, M. M., Argaw, M. D., & Kefene, Z. K. (2015). Factors associated with exclusive breastfeeding practices in Debre Berhan District, Central Ethiopia: A cross sectional community based study. *International Breastfeed Journal*, 10(23): 1-9. doi: 10.1186/s13006-015-0049-2
- Babakazo, P., Donnen, P., Akilimali, P., Ali, N. M., & Okitolonda, E. (2015). Predictors of discontinuing exclusive breastfeeding before six months among mothers in Kinshasa: A prospective study. *International Breastfeeding Journal*, 10(19): 1-9. doi: 10.1186/s13006-015-0044-7

- Balogun, O. O., Dagvadorj, A., Anigo, K. M., Ota, E., & Sasaki, S. (2015). Factors influencing breastfeeding exclusivity during the first 6 months of life in developing countries: A quantitative and qualitative systematic review. *Maternal & Child Nutrition*, 11(4): 433-451. doi 10.1111/mcn.12180.
- Bar, S., Ruth, M, & Andrew, A. (2016). Long-term neurodevelopmental benefits of breastfeeding. *Current Opinion in Paediatrics*, 28(1): 559-566, doi 10.1097/MOP.000000000000389.
- Behera, D., & Anil, K. K. (2015). Predictors of exclusive breastfeeding intention among rural pregnant women in India: A study using theory of planned behaviour. *Rural & Remote Health*, 15(3): 1.
- Berde A. S., & Yalcin S. S. (2016). Determinants of early initiation of breastfeeding in Nigeria: a population-based study using the 2013 demographic and health survey data. *BMC Pregnancy Childbirth*, 16(32): 1-9.doi: 10.1186/s12884-016-0818-y.
- Binns, C., Lee, M., & Low, W. Y. (2016). The long-term public health benefits of breastfeeding. *Asia Pacific Journal of Public Health*, 28(1): 7-14. doi: 10.1177/1010539515624964.
- Borhan N. F. (2019). *Antenal care*. Retrieved on July 28, 2019, from http://www.myhealth.gov.my/en/antenal-care/
- Brahm, P., & Valdes, V. (2017). The benefits of breastfeeding and associated risks of replacement with baby formulas. *Revista Chilena de Pediatria*, 88(1): 7-14 doi: 10.4067/S0370-41062017000100001.
- Brown, C. R. L., Doods, L., Legge, A., Bryanton, J., & Semenic, S. (2014). Factors influencing the reasons why mothers stop breastfeeding. *Canadian Journal of Public Health*, 105(3): 179-185.
- Cai, X., Wardlaw, T., & Brown, D. W. (2012). Global trends in exclusive breastfeeding. *International Breastfeeding Journal*, 7(1): 12.
- Canada at a Glance. (2017). *Population.* Retrieved on July 28, 2019, from https://www150.statcan.gc.ca/n1/pub/12-581-x/2017000/pop-eng.htm
- Chezem, J., Friesen C., & Boettcher J. (2006). Breastfeeding Knowledge, Breastfeeding Confidence, and Infant Feeding Plans: Effects on Actual Feeding Practices. *Journal of Obstetric, Gynecologic, & Amp; Neonatal Nursing*, 32(1): 40-47. doi: 10.1177/0884217502239799
- Cunha, M. C. M., Coutinho, E. C., Pereira, C. M. F., Chaves, C. M. B., Nelas, P. A. B., Amaral, O. P., Pareira, V. C., Duarte, J. C., & Cabral, L. R. (2018). The evidenced-based practice: Breastfeeding as a preventive

- factor for postpartum depression. *Computer Supported Qualitative Research*, (621): 121-130. Doi: 10.1007/978-3-319-61121-11_11
- Department of Statistic Malaysia. (2018). Marriage, and divorce statistics, Malaysia. Retrieved on September 7, 2019 from https://www.dosm.gov.my/v1/index.php?r=column/cthemeByCat&cat= 453&bul_id=ZFAzVjE1Ny93VIZXenloWXJBQmYyUT09&menu_id=L0 pheU43NWJwRWVSZklWdzQ4TlhUUT09
- Dhandapany, G., Bethou, A., Arunagirinathan, A., & Ananthakrishnan, S. (2008). Antenatal counseling on breastfeeding—is it adequate? A descriptive study from Pondicherry, India. *International Breastfeeding Journal*, 3(1): 5.
- Diji, A. K. A., Bam, V., Asante, E., Lomotey, A. Y., Yeboah, S., & Owusu, H. A. (2016). Challenges and predictors of exclusive breastfeeding among mothers attending the child welfare clinic at a regional Hospital in Ghana: A descriptive cross-sectional study. *International Breastfeeding Journal*, 12(1): 13. doi: 10.1186/s13006-017-0104-2
- Division of Family Health Development, Ministry of Health Malaysia. (2013). Perinatal Care Manual. 3rd Ed. Malaysia.
- Draman, N., Mohamad, N. Y., Harmy, M., & Muhamad, R. (2017). The decision of breastfeeding practices among parents attending primary health care facilities in suburban Malaysia. *Journal of Taibah University Medical Sciences*, 12(5): 412-417. doi: 10.1016/j.jtumed.2017.05.005
- Ekambaram, M., Bhat, V. B., & Ahamed, M. A. P. (2010). Knowledge, attitude and practice of breastfeeding among postnatal mothers. *Current Pediatric Research*, 14(2): 119-124.
- Haavardsholm, I., & Nåden, D. (2009). The concept of confidence: The nurse's perception. *European Journal of Cancer Care*, 18(5): 483-491 doi: 10.1111/j.1365-2354.00993.x.
- Hamid, S. B. A., Jun, H. C., & Binns, C. W. (2017). Predictors Breastfeeding Intention in Malaysia. *5*th *AicQoL2017Bangkok*, *E-BPJ*, 2(5): 161-167.
- Haroon, S., Das, J. K., Salam, R. A., Imdad, A., & Bhutta, Z. A. (2013). Breastfeeding promotion interventions and breastfeeding practices: A systematic review. *BMC Public Health*, 13(3): 20.
- Horta, B. L., de Mola, C. L., & Victora, C. G. (2015). Breastfeeding and intelligence: A systematic review and meta-analysis. *Acta Paediatrica*, 104(467): 14-19. Doi:10.1111/apa.13139
- Hospital Serdang. (2018). Pengiktirafan Hospital Rakan Bayi. (Sijil). Malaysia.

- Hunegnaw, M. T., Gezie, L. D., & Teferra, A. S. (2017). Exclusive breastfeeding and associated factors among mothers in Gozamin district, northwest Ethiopia: A community based cross-sectional study. *International Breastfeeding Journal*, 12(1): 30. doi: 10.1186/s13006-017-0121-1
- Ibrahim@Rahman, R. (2014). Baby Friendly Hospital Initiative. Retrieved on July 31, 2015 from http://nutrition.moh.gov.my/en/inisiatif-hospital-rakan-bayi-bfhi/
- Imdad, A., Yakoob, M. Y., & Bhutta, Z. A. (2011). Effect of breastfeeding promotion interventions on breastfeeding rates, with special focus on developing countries. *BMC Public Health*, 11(3): 24-31.
- Insitute for Public Health (IPH), National Institutes of Health, Ministry of Health Malaysia. (2016). National Health and Morbisity Survey (NHMS) 2016: *Maternal and Child Health:* Vol II: Findings, 2016: 23-28
- Ismail, T. A. T., & Sulaiman, Z. (2010). Reliability and validity of a Malayversion questionnaire assessing knowledge of breastfeeding. *The Malaysian Journal of Medical Sciences: MJMS*, 17(3): 32-39.
- Ismail, T. A. T., Muda, W. A. M. W., & Bakar, M. I. (2016). The extended theory of planned behavior in explaining exclusive breastfeeding intention and behaviour among women in Kelantan, Malaysia. *Nutrition Research and Practice*, 10(1): 49-55. Doi: 10.4162/nrp.2016.10.1.49
- Ismail, T. A. T., Muda, W. M. W., & Isa, M. B. (2013). Factors predicting early discontinuation of exclusive breastfeeding among women in Kelantan, Malaysia. *Health and the Environment Journal*, 4(1): 42-54.
- Ismail, T. A. T., Muda, W. M. W., Sulaiman, Z., Jalil, R., & Man, N. N. N. a (2012). Perceptions and practice of exclusive breastfeeding among Malay women in Kelantan, Malaysia: A qualitative approach. *Malaysian Journal of Nutrition*, 18(1): 15-25.
- Ismail, T. A. T., Sulaiman, Z., Jalil, R., Muda, W. M. W., & Man, N. N. N. b (2012). Breast milk expression among formally employed women in urban and rural Malaysia: A qualitative study. *International Breastfeeding Journal*, 7(1): 11.
- Kent J. C., Hepworth A. R., Langton D. B. & Peter E. H. (2015). Impact of measuring milk production by test weighing on breastfeeding confidence in mothers of term infants. *Breastfeeding Medicine*, 10 (6): 318-325. doi 10.1089/bfm.2015.0025
- Keresztes, C., & Schmidt, M. (2012). *Prenatal Breastfeeding Class Evaluation*. Retrieved on July 15, 2015 from https://www.kflaph.ca/en/research-and-reports/prenatal-breastfeeding-class-evaluation.aspx

- Krol, K. M., Monakhov, M., Poh, S. L., Ebstein, R. P., Heinirichs, M., & Grossmann, T. (2018). Genetic variation in the maternal oxytocin system affects cortisol responsiveness to breastfeeding in infants and mothers. *Adaptive Human Behavior and Physiology*, 4(3): 248-263. doi: 10.1007/s40750-018-0090-7
- Kuzma, J. (2013). Knowledge, attitude and practice related to infant feeding among women in Papua New Guinea: a descriptive, mixed method study. *International Breastfeeding Journal.* 8(1): 167. doi: 10.1186/1746-4358-8-1
- Kwah, K. L., Whiteman, B. L., Grunfeld, E. A., Niccolls, C., & Wood, E. (2018). Evaluation of an intervention to increase clinician knowledge and confidence to support breastfeeding, kangaroo care and positive touch within neonatal units. *Journal of Neonatal Nursing*, 24(12): 94-99. Doi 10.1016/j.jnn.2017.10.003
- Labbok, M. H. (2012). Global baby-friendly hospital initiative monitoring data: Update and discussion. *Breastfeeding Medicine*, **7** (4): 210-222. doi: 10.1089/bfm.2012.0066
- Lau, C. Y. K., Lok, K. Y. W., & Marie, T. (2018). Breastfeeding duration and the theory of planned behaviour and breastfeeding self-efficacy framework: A systematic review of observational studies. *Maternal and Child Health*, 22(3): 327-342.
- Lenja, A., Demissie, T., Yohannes, B., & Yohannis, M. (2016). Determinants of exclusive breastfeeding practice to infants aged less than six months in Offa district, Southern Ethiopia: A cross-sectional study. *International Breastfeeding Journal.* 11(32): 1-7. doi 10.1186/s13006-016-0091-8
- Luerer, M. D., & Misskey, E. (2015). "Be positive as well as realistic": A qualitative description analysis of information gaps experienced by breastfeeding mothers. *International Breastfeeding Journal*, 10(10): 1-11. doi:10.1186/s13006-015-0036-7
- Lumbiganon, P., Martis, R., Laopaiboon, M., Festin, M. R., Ho, J. J., & Hakimi, M. (2016). Antenatal breastfeeding education for increasing breastfeeding duration. *Cochrane Database of Systematic Reviews*, (12): 1-82.
- Maonga A. R., Mahande M. J., Damian D. J., & Msuya S. E. (2016). Factors Affecting Exclusive Breastfeeding among Women in Muheza District Tanga Northeastern Tanzania: A Mixed Method Community Based Study. *Matern Child Health J*, 20 (1): 77-87.doi: 10.1007/s10995-015-1805-z
- Mbada, C. E., Olowookere, A. E., Faronbi, J. O., Oyinla-Aromolaran, F. C., Faremi, F. A., Ogundele, A. O., Awotidebe, T. O., Ojo, A. A., &

- Augustine, O. A. (2013). Knowledge, attitude and techniques of breastfeeding among Nigerian mothers from a semi-urban community. *BMC Research Notes*, 6(552): 1-8. Doi: 10.1186/1756-0500-6-552
- Mogre V., Dery M., & Gaa P. K. (2016). Knowledge, attitudes and determinants of exclusive breastfeeding practice among Ghanaian rural lactating mothers. *International Breastfeeding Journal*, 11(12): 1-8. doi: 10.1186/s13006-016-0071-z
- Muda, C. M. C., Ismail, T. A. T., Jalil, R. A., Hairon, S. M., Sulaiman, Z., & Johar, N. (2018). Maternal factors associated with the initiation of exclusive breastfeeding among mothers at one week after delivery in two selected hospital in Kelantan, Malaysia. *The Malaysian Journal of Medical Sciences: MJMS*, 25(4): 112-121. doi:10.21315/mjms2015.25.4.11
- Nazatul, S. B., & Ruby, H. (2009). Challenge and support for the breastfeeding in highly motivated Malaysian mothers. *Journal of the University of Malaya Medical Centre*, 12(2): 70-73.
- Nigeria Data Portal. (2016). Nigeria population by marital status. Retrieved on July 28, 2019, from http://nigeria.opendataforafrica.org/yjdggyg/nigeria-population-by-marital-status
- Nkrumah, J. (2016). Maternal work and exclusive breastfeeding practice: A community based cross-sectional study in Efutu Municipal, Ghana. *International Breastfeeding Journal*, 12(1): 10-19.
- Norjinah M. & Adlina S. (2013). BHFI in Malaysia. One Asia Breastfeeding Partners Forum Luang Prabang
- Nyqvist, K. H., Häggkvist, A., Hansen, M. N., Kylberg, E., Frandsen, A. L., Maastrup, R., Ezeonodo, A., Hannula, L., Koskinen, K., & Haiek, L. N. (2012). Expansion of the ten steps to successful breastfeeding into neonatal intensive care: Expert group recommendations for three guiding principles. *Journal of Human Lactation*, 29 (3): 286-296. doi: 10.1177/089034412441862
- Odom, E. C., Li, R., Scanlon, K. S., Perrine, C. G., Grummer-Strawn, L. (2013). Reasons for earlier then desired cessation of breastfeeding. *Paediatrics Journal*, 131(3): 726-732.
- Ogbo F. A., Eastwood J., Page A., Arora A., McKenzie A., Jalaludin B., Early Years Research, Group. (2016). Prevalence and determinants of cessation of exclusive breastfeeding in the early postnatal period in Sydney, Australia. *International Breastfeeding Journal*, 12(16): 1-10. doi: 10.1186/s13006-017-0110-4

- Patterson, J. A., Olson, B. H., & Keuler, N. S. (2016). The effect of the baby friendly hospital initiative on exclusive breastfeeding rates in Hospitals. *The Federation of American Societies for Experimental Biology (FASEB) Journal*, 30(1): 45-48.
- Perrine C. G., Scanlon K. S., Li R., Odom R., Grummer-Strawn LM. (2012). Baby-Friendly Hospital Practices and Meeting Exclusive Breastfeeding Intention. *Pediatrics* 130(1): 54-60. doi: 10.1542/peds.2011-3633.
- Pinto E., Chaves C., Duarte J., Nelas P., & Coutinho E. (2016). Maternal affection and motivation for breastfeeding. *Procedia-Social and Behavioral Sciences*, 217(2016): 1028-1035.
- Rashadiba I. & Nur Shafawati M. G. (2018). Inisiatif Hospital Rakan Bayi (BFHI). Bahagian Pemakanan Kesihatan Malaysia, from: http://nutrition.moh.gov.my/inisiatif-hospital-rakan-bayi-bfhi/
- Renfrew, M. J., McCormick, F. M., Wade, A., Quinn, B., & Dowswell, T. (2012). Support for healthy breastfeeding mothers with healthy term babies. *Cochrane Database of Systematic Reviews*, 16(5): 1-121. doi: 10.1002/14651858.
- Ross-Cowdery, M., Lewis, C. A., Papic, M., Corbelli, J. & Schwarz, E. B. (2016). Counseling about the maternal health benefits of breastfeeding and mothers' intentions to breastfeed. *Maternal and Child Health Journal*, 21(2): 234-241.
- Rosuzeita F., Che Rabiaah M., Rohani I., Mohd Shukri O. The effectiveness of breastfeeding intervention on breastfeeding exclusivity and duration among primiparous mothers in Hospital Universiti Sains Malaysia. *Malaysia Journal of Medical Sciences.* 2018, 25(1): 53-66. https://doi.org/10.21315/mjms2018.25.1.7
- Saied, H., Mohamed, A., Suliman, A., & Anazi, W. A. (2013). Breastfeeding knowledge, attitude and barriers among Saudi Women in Riyadh. Journal of Natural Sciences Research, 3(12): 6-14. ISSN 2225-0921
- Salone, L. R., Vann, W. F., & Dee, D. L. (2013). Breastfeeding: An overview of oral and general health benefits. *Journal of the American Dental Association*, 144(2): 143–151. doi: 10.14219/jada.archive.2013.0093
- Schools in Canada. (2019). *Education System in Nova Scotia*. Retrieved on July 25, 2019, from https://www.schoolsincanada.com/Education-System-in-Nova-Scotia.cfm
- Select Statistical Services. (2015). Comparing two means sample size.

 Retrieced on September 20, 2015, from https://select-statistics.co.uk/calculators/sample-size-calculator-two-means/

- Statistic on Women, Family and Community. (2016). Kementerian Pembangunan Wanita dan Keluarga Malaysia. Malaysia. Retrieved on September 28, 2019 from https://www.kpwkm.gov.my/kpwkm/uploadsfiles/Penerbitan/Buku%20 Perangkaan/Perangkaan%202016.pdf
- Stone R. G. (2016). What does "sociodemographic mean? How is it used in social sciences? Psychology/sociology Seminar. Retrieved on 15 September, 2019 from: https://www.quora.com/What-does-sociodemographic-mean-How-is-it-used-in-social-sciences
- Stuebe, A. M., & Bonuck, K. (2011). What predicts intent to breastfeed exclusively? Breastfeeding knowledge, attitudes, and beliefs in a diverse urban population. *Breastfeeding Medicine*, 6(6): 413-420. doi 10.1089/bfm.2010.0088
- Suruhanjaya Syarikat Malaysia & Unicef (2011). Establishing a conducive working environment for women: Nursing mothers programme at the workplace. Best Business Practice Circular2/2011. Kuala Lumpur, Malaysia.
- Tadele, N., Habta, F., Akmel, D., & Deges, E. (2016). Knowledge, attitude and practice towards exclusive breastfeeding among lactating mothers in Mizan Aman town, Southwestern Ethiopia: descriptive cross-sectional study. *International Breastfeeding Journal*, 11(3): 1-7. doi: 10.1186/s13006-016-0062-0
- Tahir N. M., & Al-Sadat N. (2013). Does telephone lactation counselling improve breastfeeding practices?: A randomised controlled trial. *International Journal of Nursing Studies*, 50(1): 16-25.
- Tan K. L.^a (2009). Factors associated with non-exclusive breastfeeding among 4-week post-partum mothers in Klang District, Peninsular Malaysia. *Malaysian Journal of Nutrition*, 15(1): 11-18.
- Tan, K. L.^b (2009). Knowledge, attitude and practice on breastfeeding in Klang, Malaysia. *International Medical Journal*, 8(1): 17-21.
- Tan, K. L. (2011). Factors associated with exclusive breastfeeding among infants under six months of age in peninsular Malaysia. *International Breastfeeding Journal*, 6(1): 2.
- Thet, M. M., Khaing, E. E., Diamond-Smith, N., Sudhinaraset, M., Oo, S., & Aung, T. (2016). Barriers to exclusive breastfeeding in the Ayeyarwaddy Region in Myanmar: Qualitative findings from mothers, grandmothers, and husbands. *Appetite*, *1* (96): 62-69. doi: 10.1016/j.appet.2015.08.044.
- Thomas-Jackson, S. C., Bentley, G. E., & Keyton, K. (2015). In-hospital breastfeeding and intention to return to work influences mothers'

- breastfeeding intentions. *Journal of Human Lactation, 32* (4): 76-83. doi:10.1177/0890334415597636.
- Thorley, V. (2015). The tenth step of the BFHI: What midwives need to know about optimal support for mothers, post-discharge. *Midwifery*, 31(9): 829-833. doi: 10.1016/j.midw.2015.06.006. Retrieved on 30 September, 2019 from https://www.sciencedirect.com/science/article/pii/S026661381500186 2
- Unicef Homepage. (1991). The Baby-Friendly Hospital Initiative. Retrieved on 05 May, 2015 from https://www.unicef.org/programme/breastfeeding/baby.htm
- Unicef. (2017). Countries experiences with the Baby-Friendly Hospital Initiative: Compendium of case studies from around the world.

 Retrieved on 15 July, 2019 from https://www.unicef.org/nutrition/files/BFHI_Case_Studies_FINAL.pdf
- Victoria, C. G., Bahl, R., Barros, A. J. D., FranÇa, G. V. A., Horton, S., Krasevec, J., Murch, S., Sankar, M. J., Walker, N., & Rollins, N. C. (2016). Breastfeeding in the 21st century: Epidemiology, mechanisms, and lifelong effect. *The lancet,* 387(10017): 475-490. doi: 10.1016/0140-6736(15)01024-7.
- Wallace, L. M., Ma, Y., Qiu, L. Q., & Dunn, O. M. (2018). Educational videos for practitioners attending Baby-Friendly Hospital Initiative workshop supporting breastfeeding positioning, attachment and hand expression skills: Effects on knowledge and confidence. *Nurse Education in Practice*, 31: 7-13. Doi: 10.1016/j.nepr.2018.04.005.
- Wambach, K. A. (1997). Breastfeeding intention and outcome: A test of the theory of planned behaviour. Research in Nursing Health, 20 (1): 51-59. Doi: 10.1002/(SICI)1098-240X(199702)20:1<51::AID-Nur6>3.0.CO;2-T.
- White, H., & Sabarwal, S. (2014). Quasi-experimental design and methods, methodological briefs: Impact evaluation. UNICEF Office of Research, Florence.
- Whitford, H. M., Wallis, S. K., Dowswell, T., West, H. M., & Renfrew, M. J. (2017). Breastfeeding education and support for women with twins or higher order multiples. *Cochrane Database Systematic Review, 2*, CD012003. doi: 10.1002/14651858.CD012003.pub2.
- Williams, A., Young, J., Kearney, L., & Keogh, S. (2013). Improving knowledge of breastfeeding management: A practice development intervention for paediatric nurses. *Neonatal, Paediatric & Child Health Nursing*, 16(2), 8.

- Witt, A. M., Bolman, M., & Kredit, S. (2016). Mothers value and utilize early outpatient education on breast massage and hand expression in their self-management of engorgement. *Breastfeeding Medicine*, 11(9): 433-439. doi 10.1089/bfm.2016.0100.
- World Health Organization (WHO). (2009). *Nutrition: Breastfeeding.* Retrieved on 10 April, 2015 from https://www.who.int/nutrition/topics/exclusive breastfeeding/en/
- World Health Organization^a (WHO). (2017). 10 Facts on breastfeeding. Retrieved on 15 July, 2015 from https://www.who.int/features/factfiles/breasfeeding/en/
- World Health Organization^b (WHO). (2017). *National implementation of the baby-friendly hospital initiative: Summary* (No. WHO/NMH/NHD/17.4). World Health Organization.
- World Health Organization^c (WHO). (2017). *Guideline: Protecting, promoting and supporting breastfeeding in facilities providing maternity and newborn services*. Geneva: World Health Organization.
- World Health Organization. (2014). Global nutrition targets 2025: Breastfeeding policy brief (WHO/NMH/NHD/14.7). Geneva: World Health Organization.
- World Health Organization. (2018). Global breastfeeding scorecard, 2018 enabling women to breastfeed through better policies and programmes. Retrieved on 15 July, 2015 from https://www.who.int/nutrition/publications/infantfeeding/global-bf-scorecard-2018.pdf?ua=1
- Yeneabat T., Belachew T., & Haile M. (2014). Determinants of cessation of exclusive breastfeeding in Ankesha Guagusa Woreda, Awi Zone, Northwest Ethiopia: a cross-sectional study. *BMC Pregnancy and Childbirth*, 14(262): 1-12. doi: 10.1186/1471-14-262.
- Yotebieng, M., Labbok, M., Soeters, H. M., Chalachala, J. L., Lapika, B., Vitta, B. S., & Behets, F. (2015). The steps to successful breastfeeding programme to promote early initiation and exclusive breastfeeding in DR Congo: A cluster-randomised controlled trial. *The Lancer Global Health*, 3(9): 1-10. doi 10.1016/S2214-109X(15)00012-1.
- Yu E. A., Thomas J. S., Owais A., Tirmizi N., Faruque ASG., Das SK., Rahman S., Schwartz B., & Stein AD. (2014). Maternal Prenatal Attitudes and Postnatal Breast-Feeding Behaviors in Rural Bangladesh. *Public Health Nutrition*. 18(4): 679-685. Doi: 10.1017/s1368980014000937.
- Zakarija-Grković, I., Boban, M., & Janković, S. (2017). Compliant with WHO/UNICEP BFHI Standards in Croatia after implementation of the BFHI. *Journal of Human Lactation*, 34(1): 106-115. Doi:

- 10.1177/0890334417703367.
- Zhang, Z., Zhu, Y., Zhang, L., & Wan, H. (2018). What factors influence exclusive breastfeeding based on the theory of planned behaviour. *Midwifery*, 62: 177-182. Doi: 10.1016/j.midw.2018.04.006.
- Zhu, Y., Zhang, Z., Ling, Y., & Wan, H. (2017). Impact of intervention on breastfeeding outcomes and determinants based on theory of planned behaviour. *Women and Birth*, 30(2): 146-152.



BIODATA OF STUDENT

The student, Nurul Hidayu binti Ibrahim was born in Kuala Lumpur, Malaysia. She completed her primary education at Sekolah Kebangsaan Bandar Baru Sentul, Kuala Lumpur. She continued the secondary education in Sekolah Menengah Kebangsaan Bandar Baru Sentul, Kuala Lumpur until her completion of Sijil Peperiksaan Menengah Rendah (PMR) in 2002 and continued her form 4 and form 5 study at Maktab Rendah Sains Mara Beseri. Kangar, Perlis until her completion of Sijil Pelajaran Malaysia (SPM) in 2004. She then continued her study in Pahang Matriculation College, Pahang (Science Stream). In 2006, she enrolled a bachelor degree course in Health Sciences (Nursing) in Universiti Sains Malaysia (USM) Kubang Kerian, Kelantan and successfully graduated in October 2010. From October 2010, she involved in an education industry and worked as a junior lecturer at a private health care college in Kota Bharu and Kota Kinabalu for almost 3 months. After that, she precedes her career as Nursing Tutor in Kementerian Kesihatan Malaysia and worked at Kolej Jururawat Masyarakat Port Dickson, Negeri Sembilan until September 2019 before the college merged with Institut Latihan Kementerian Kesihatan Malaysia (Kejururawatan) Kuala Pilah, Negeri Sembilan. She still works as nursing tutor until now. In 2015, she was accepted to pursue a full-time master research program I Nursing without any fellowship or sponsorship. In completion of her master journey, she had been participating in ILKKM Regional Conference on Medical & Allied Health Education 2019 by presenting poster and published a proceeding in the conference journal.

PUBLICATION

- Ibrahim N.H., Japar S., Ong S.L., Soh K.G. and Soh K.L. (2019). Knowledge of Breastfeeding among mothers in Public Antenatal Clinic, Malaysia. *ILKKM Journal of Medical and Health Sciences (Special Issues: ILKKM Regional Conference on Medical and Allied Health Education 2019).* 1(2): 22-24
- Ibrahim N.H., Japar S., Ong S.L., Soh K.G. and Soh K.L. (2020). Factors associated with exclusive breastfeeding practices within the six weeks of postpartum period among Malaysian mothers: A cross-sectional study in a public clinic, Malaysia. *International Breastfeeding Journal* (Submited)

Poster presentation at ILKKM Regional Conference on Medical and Allied Health Education 2019 on 3rd September 2019 at Hotel Berjaya Times Square, Kuala Lumpur



UNIVERSITI PUTRA MALAYSIA

STATUS CONFIRMATION FOR THESIS / PROJECT REPORT AND COPYRIGHT

ACADEMIC SESSION: Second Semester 2019/2020

TITLE OF THESIS / PROJECT REPORT:

ANTE- AND POST-NATAL KNOWLEDGE OF BREASTFEEDING AND ITS PRACTICE
WITHIN SIX WEEKS OF POSTPARTUM PERIOD AMONG MOTHERS IN A PUBLIC
HOSPITAL, SELANGOR, MALAYSIA

NAME OF STUDENT: NURUL HIDAYU BINTI IBRAHIM

I acknowledge that the copyright and other intellectual property in the thesis/project report belonged to Universiti Putra Malaysia and I agree to allow this thesis/project report to be placed at the library under the following terms:

- 1. This thesis/project report is the property of Universiti Putra Malaysia.
- 2. The library of Universiti Putra Malaysia has the right to make copies for educational purposes only.
- 3. The library of Universiti Putra Malaysia is allowed to make copies of this thesis for academic exchange.

I declare that this thesis is classified as:

*Please tick (V)

CONFIDENTIAL	(Contain confidential information under Official Secret Act 1972).
RESTRICTED	(Contains restricted information as specified by the organization/institution where research was done).
OPEN ACCESS	I agree that my thesis/project report to be published as hard copy or online open access.
This thesis is submitted for :	
PATENT	Embargo from until (date)
	Approved by:
(Signature of Student) New IC No/ Passport No.:	(Signature of Chairman of Supervisory Committee) Name:
Date :	Date :

[Note: If the thesis is CONFIDENTIAL or RESTRICTED, please attach with the letter from the organization/institution with period and reasons for confidentially or restricted.]