



UNIVERSITAS INDONESIA

**THE EXPERIENCE OF BREASTFEEDING PROBLEMS
DURING THE FIRST SIX MONTHS PERIOD AFTER
DELIVERY AMONG MOTHERS HAVING INFANTS
AGED 6-12 MONTHS**

THESIS

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**FACULTY OF MEDICINE UNIVERSITAS INDONESIA
STUDY PROGRAM IN NUTRITION
JAKARTA
JULY, 2012**



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**In partial fulfillment of the requirements for the degree of
Master of Science in Community Nutrition**

**MANJILALA
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**FACULTY OF MEDICINE UNIVERSITAS INDONESIA
STUDY PROGRAM IN NUTRITION
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JULY, 2012**

AUTHOR'S DECLARATION OF ORIGINALITY PAGE

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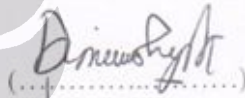
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PREFACE

Breastfeeding practices are often proven to be challenging, especially for mothers encounter with breastfeeding problems. Previous studies showed that many factors contribute to the low rate of exclusive breastfeeding practice. One of them is the inability of mothers to manage her breastfeeding problem, due to lack of knowledge regarding breastfeeding problems managements and lack of support from family, community and health authority (Olang et al., 2012).

Studies regarding breastfeeding problems among mothers are limitedly explored (UNICEF, 2011), on the other hand, the breastfeeding problems were common during the first six months period in various countries, and most of them relate to breastfeeding cessation and shorter breastfeeding periods.

Many studies had identified the type of common breastfeeding problems during breastfeeding period. However, information regarding when the problems occurred, how mothers managed, who supported mother when they experience breastfeeding problems and how her problems were responded to, are limitedly explored. Therefor study on the experience of breastfeeding problems during the first six months period after delivery among mothers having infants aged 6-12 months is important to be conducted.

This thesis is divided into six chapters which consist of introduction (chapter 1), literature review (chapter 2), methodology (chapter 3), results (chapter 4), discussions (chapter 5) and conclusions and recommendation (chapter 6). In appendix, the manuscript of this thesis to be submitted to The Journal of Public Health Nutrition is included.

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Jakarta, July 12th, 2012
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PUBLICATION APPROVAL FOR ACADEMIC PURPOSE

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ABSTRACT

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Title : The experience of breastfeeding problems during the first six months period among mothers having infants aged 6-12 months

This study was aimed to describe experiences of breastfeeding problems during the first six month period among mother having infant aged 6-12 months. This study is a cross sectional study using structured interviews. This study found that breastfeeding problems was very commonly experienced by mothers during the first six months after delivery and tended to decrease the rate of exclusive breastfeeding practice. Furthermore, there are needs to empower lactation counselor and enrich IEC breastfeeding materials with breastfeeding problems issues.

Key words:

Breastfeeding problems, breastfeeding knowledge, breastfeeding practices, exposure of information, breastfeeding support.

ABSTRAK

Nama : Manjilala
Program Studi : Gizi
Judul : Masalah dalam pemberian ASI selama periode enam bulan pertama setelah melahirkan pada ibu yang memiliki anak umur 6-12 bulan

Penelitian ini bertujuan untuk memberikan gambaran tentang pengalaman ibu yang memiliki anak umur 6-12 bulan dalam menjalani masalah menyusui selama periode satu bulan pertama setelah melahirkan. Penelitian ini merupakan penelitian *cross sectional*. Data diperoleh dengan menggunakan metode wawancara terstruktur. Hasil penelitian menunjukkan bahwa masalah menyusui sangat umum dialami oleh ibu selama periode enam bulan pertama setelah melahirkan dan berpengaruh terhadap penurunan cakupan pemberian ASI eksklusif. Dibutuhkan usaha yang lebih efektif untuk meningkatkan kemampuan konselor laktasi serta memperkaya bahan-bahan penyuluhan ASI dengan informasi masalah menyusui.

Kata Kunci:

Masalah menyusui, pengetahuan pemberian ASI, praktek pemberian ASI, promosi pemberian ASI, dukungan pemberian ASI

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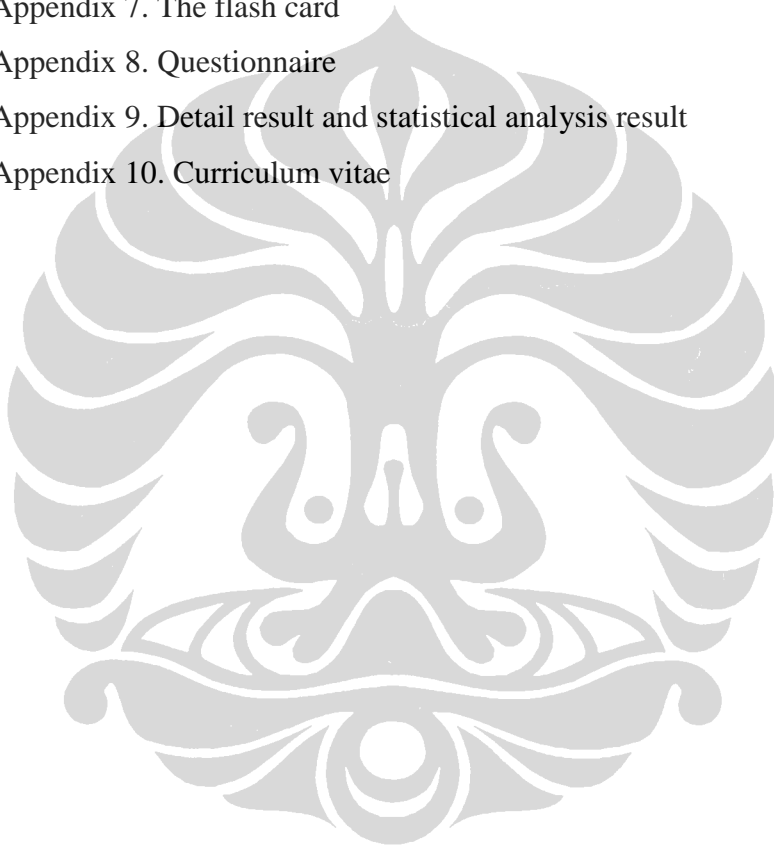
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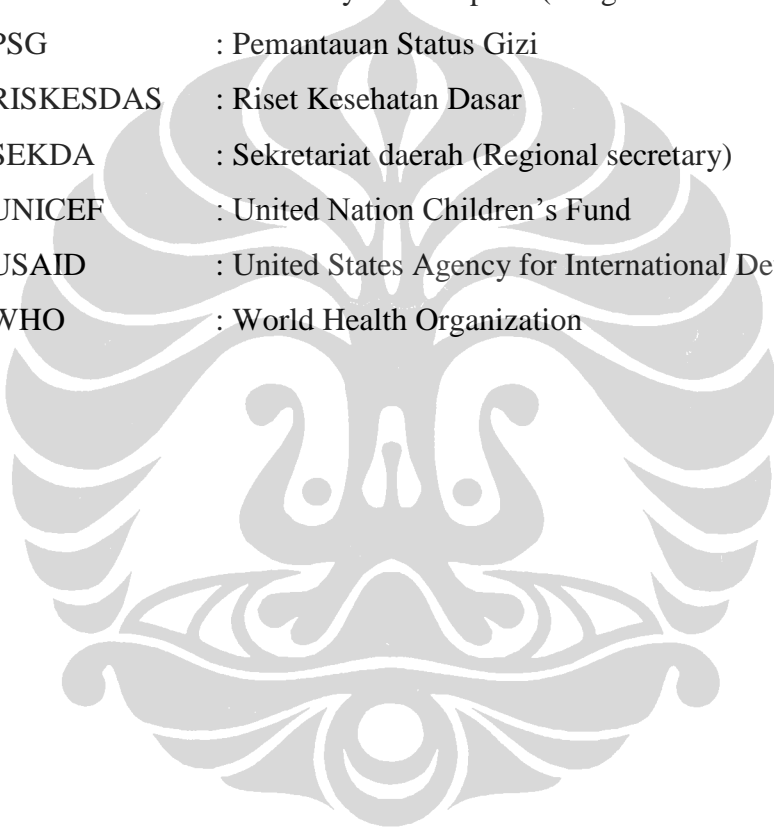
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LIST OF ABBREVIATIONS

ADB	: Asian Development Bank
DINKES	: Dinas Kesehatan (Department of health)
EBF	: Exclusive breastfeeding
IYCF	: Infant and Young Child Feeding
NICE	: Nutrition Improvement through Community Empowerment
PHC	: Public Health Center (Puskesmas)
POSYANDU	: Pos Pelayanan Terpadu (Integrated Health Post)
PSG	: Pemantauan Status Gizi
RISKESDAS	: Riset Kesehatan Dasar
SEKDA	: Sekretariat daerah (Regional secretary)
UNICEF	: United Nation Children's Fund
USAID	: United States Agency for International Development
WHO	: World Health Organization



OPERATIONAL DEFINITIONS

Breastfeeding problems	Some difficulties faced by mothers in feeding her infants with breast milk, whether related to mother and/or infant
Breastfeeding knowledge	Knowledge of mothers regarding duration of breastfeeding and common breastfeeding problems
Breastfeeding practices	The process of infant obtaining milk by suckling at the breast (Riordan, 2005)
Breastfeeding experiences	The experienced of mothers in feeding infant with breast milk.
Breastfeeding promotion	The activities to promote the initiation and successful exclusive breastfeeding practices through <i>penyuluhan</i> , counseling, as well as printed materials (WHO, 2003)
Complementary feeding	The transition from exclusive breastfeeding to family foods (WHO, 2010)
Exposure of breastfeeding information	Experiences of mothers in obtaining information about breastfeeding programs from health provider or other sources
Exclusive breastfeeding	Feeding infant only with breast milk, no other food or drink, not even water during the first six months after delivery. However, allow the infant to receive oral rehydration salts (ORS), drops and syrups (vitamins, minerals and medicines) (WHO, 2010)
Family and Community support	Type of support from family members and community when mothers experienced of breastfeeding problems.
Health services	Type of health services regarding the breastfeeding program
Lactation/breastfeeding counselor	Persons who participated in lactation counselor training using breastfeeding module which published by WHO.
The experience of breastfeeding problems	The experience of mother regarding breastfeeding problems during first six months after delivery i.e type of problem, when the problem's occurrence, how mother coping her problem, people who supported mother, type of supported and breastfeeding practices
Type of breastfeeding problem	Type of a breastfeeding problem occurring during exclusive breastfeeding period, whether physical, psychological and technical
Time of problems occurred	Time of problems occurred based on age of infant, i.e 0-1 months, 1-3 months, and 3-6 months
The coping mechanism	The responses of mothers to overcome her breastfeeding problems, i.e. self-treatment (follow medical guidelines or not) or looking for help (who, where & forms of assistance provided)

CHAPTER 1

INTRODUCTION

1.1 Background

Breast milk is the natural food that provides all the nutrients, available at any time and affordable especially for infant aged 0-6 months. Infant can obtain adequate intake through proper breastfeeding practice (WHO, 2011).

Many mothers consider that breastfeeding is easy, because it is a natural process and easy to practice. However, the prevalence of exclusive breastfeeding practice (EBF) was low in the all levels, whether in the World level or District level.

In general, the prevalence of exclusive breastfeeding practice in World level only 34.8% and Asian country was 46.0% (WHO, 2009, IBFAN, 2010). In Indonesia, the prevalence slowly decreased during two past decade from 63.0% in 1987 to 32.0% in 2007 (WHO and UNICEF, 2010, BPS and International, 2008). In South Sulawesi Provinces and Maros District, the prevalence of EBF was 48.64% and 30.82% respectively in 2010.

Low rate of exclusive breastfeeding and shorter duration of breastfeeding practices could increase mortality risk among infants. A review study showed that if the coverage of exclusive breastfeeding program can reach more than 90%, the proportions of child deaths reduced around 13% (Jones et al., 2003).

Previous studies showed that many factors contribute to the low rate of exclusive breastfeeding practice. One of them is inability of mothers to manage her breastfeeding problem, due to lack of knowledge regarding breastfeeding problems managements and lack of support from family, community and health authority (Olang et al., 2012).

Many studies showed that breastfeeding problems may related to breastfeeding cessation, shorter breastfeeding periods or complement breastfeeding with formula milk/other food (Lamontagne et al., 2008, Abou-Dakn et al., 2009, Amir et al., 2007, Februhartanty et al., 2006, Giugliani, 2004, Mallikarjuna et al., 2002, Hsi and Leeman, 2010).

On the other hand, the breastfeeding problems were common during the first six months period. A study in West-Berlin, Jakarta, Quebec-Canada and Rural Karnataka-India, showed that 67.8%, 87.3%, 56.4%, and 46.1% of mothers had at least one breastfeeding problem respectively (Abou-Dakn et al., 2009, Februhartanty et al., 2006, Lamontagne et al., 2008, Mallikarjuna et al., 2002).

Several studies had explained the most common breastfeeding problems experienced by the mother during the first six months after delivery. A study from Februhartanty et al., (2006) showed that the top four of common breastfeeding problems among mothers in DKI Jakarta were feeling anxious and stressed, tired and fatigued, sore nipple and perceiving milk insufficiency.

A study from Lamontagne et al., (2008) showed that nipples/breast pain, low milk supply and latching difficulties were the three most frequent major breastfeeding problems identified by mothers.

One review study showed that common problems which may arise during the breastfeeding period were breast engorgement, plugged milk duct, breast infection and insufficient milk supply (Giugliani, 2004).

However, studies regarding breastfeeding problems among mothers still limitedly explored. Most previous studies only explored type of breastfeeding problems, people who supported mothers as well as breastfeeding practiced of mothers. Lack of information about when the problems starting to occur, types of the problems, how mothers cope her problems, people who supported mothers and how the breastfeeding practices when they experience breastfeeding problems.

Therefore, a study is needed to give wider information regarding timing when the breastfeeding problems occur, type of breastfeeding problems, the coping mechanism of mothers, person whom supported mothers, type of supports and the breastfeeding practice when mother experienced breastfeeding problems.

That information is very important to manage breastfeeding problems using appropriate approach as well as prevent the problems since the beginning, or if problems have already occurred the health worker, lactation counselor, mothers as well as family member know how to manage it in order not intruding the breastfeeding practice (UNICEF, 2011).

1.2 Problem Statements

Maros district is located in South Sulawesi, which borders with Makassar City as the capital of South Sulawesi. In 2010, the prevalences of exclusive breastfeeding is only 30.82%, much lower than the national target which is 80.0% (DINKES, 2011). This confirmed that EBF is still a problem in Maros District.

Breastfeeding problems are one of the factors, which contribute to low rate of exclusive breastfeeding practice (Olang et al., 2012). On the other hand, the problems commonly occur during the EBF period.

Lack of information regarding the prevalence of breastfeeding problems in Maros district as well as in South Sulawesi, however, a study in DKI Jakarta showed that 87.3% mothers have at least one breastfeeding problems during the EBF period (Februhartanty et al., 2006).

1.3 Rationale of the Study

By considering the problems captured in previous studies and also the health profile of Maros District, mentioned previously, this study focus on the experienced of breastfeeding problems by mothers during the first six month period after delivery.

Previous studies have identified the type of common problems during exclusive breastfeeding period. However, information regarding when the problems occurred, how mothers managed, who is supported mother when they experience breastfeeding problems and how her problems were responded to are limitedly explored.

On the other hand, previous studies showed that mothers having at least one breastfeeding problems tended to mixed feeding with other food and shorter duration of breastfeeding practices (Lamontagne et al., 2008, Abou-Dakn et al., 2009, Amir et al., 2007, Februhartanty et al., 2006, Giugliani, 2004, Mallikarjuna et al., 2002, Hsi and Leeman, 2010).

Those conditions are very harmful, because if infants did not get optimal feeding during the first six months especially from breast milk, their nutritional status will decrease, frequently ill, and in the long term, will increase risk of death (Jones et al., 2003)

According to Health profile of the Maros district in 2010, Maros district has good resources in term of health workers, because each village have a midwife and most of them live in the villages, as well as availability of a lactation counselor in each Puskesmas.

Therefore, the result of this study will be useful for the department of health and its stakeholders to improve exclusive breastfeeding promotion, particularly how to interact with the mothers in a nonjudgmental and supportive way to assist exclusive breastfeeding practices and to plan and evaluate appropriate interventions to improve breastfeeding duration.

1.4 Goal of The Study

To contribute to the improvement of rural health services in promoting exclusive breastfeeding practice.

1.5 Purpose of The Study

Providing valuable inputs to all stakeholders (i.e. Program planners at sub-district, district health offices and breastfeeding NGO) for strengthening and/or improving the existing exclusive breastfeeding program.

1.6 Research Question

How do mother having infants age 6-12 months experience breastfeeding problems during the first six months after delivery in Maros District, South Sulawesi Province?

1.7 Objective of the Study

1.7.1 General objective

To describe the experience of breastfeeding problems during the first six months after delivery among mothers of infant aged 6-12 months in two sub district, Maros District, South Sulawesi Provinces.

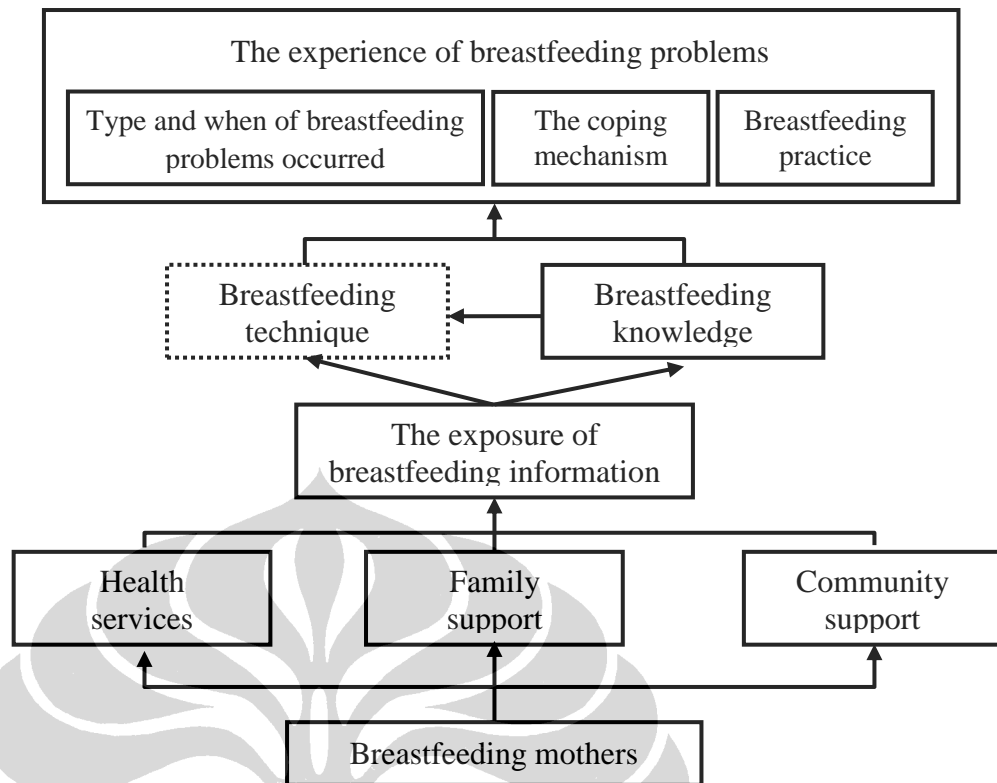
1.7.2 Specific objectives

1. To identify the type and time of breastfeeding problems occurred during the first six months after delivery.
2. To describe breastfeeding practice when mothers experienced breastfeeding problems.
3. To describe the coping mechanism of the breastfeeding problems.
4. To identify the person who helped mother when she experienced breastfeeding problems during the first six months after delivery.
5. To assess the breastfeeding knowledge of mothers
6. To assess the exposure of breastfeeding information among mothers

1.8 Conceptual framework

This study applied the conceptual framework adapted and modified from the factors affecting breastfeeding practice by Hector et al., (2005). However, this study only explored individual and group level factors. The society level factors is not explored due to limited time and budget.

The main outcome of this study is the experience of breastfeeding problems among mothers, breastfeeding problems in this study focused on the mother as well as the infant.



Note : _____ : Assessed
 ----- : Not assessed

Figure 1.1 The conceptual framework

1.9 Fact and hypothesis matrix of the study

Table 1.1 Fact and hypothesis matrix

Variable 1	Variable 2	References
Health services	The exposure of breastfeeding information	Priscilla (2008); UNICEF (2011)
Family support	The exposure of breastfeeding information	Februhartanty et al. (2006); Duong et al. (2004)
Community support	The exposure of breastfeeding information	Rose et al. (2004); UNICEF (2011); Wibowo et al. (2008)
The exposure of breastfeeding information	Breastfeeding knowledge	WHO (2003); Imdad et al. (2011); Renfrew et al. (2009)
Breastfeeding knowledge	Type and when of breastfeeding problems occurred	Hypothesis
Breastfeeding knowledge	The coping mechanism	Hypothesis
Breastfeeding knowledge	Breastfeeding practice	Wibowo et al. (2008)

CHAPTER 2

LITERATURE REVIEW

2.1 The experience of breastfeeding problems

The meaning of breastfeeding is feeding a baby with breastmilk from the breast (Soanes et al., 1994). Breastfeeding is the process of infant obtaining milk by suckling at the breast (Riordan, 2005). Problems are defined as difficulties which requiring a solution (Soanes et al., 1994). Breastfeeding problem refers to some difficulty faced by mothers in feeding her baby with breast milk.

Exclusive breastfeeding defined as the feeding of infant with only breast milk without any additional liquid of food except ORS and vitamin and/or mineral supplements for the first six months of life. National and international recommendations suggest that all infants should receive exclusive breastfeeding and sustain until two years or more (WHO, 2010b).

Optimal breastfeeding is a challenging experience for both mother and infant. Infant will receive sufficient milk if no problems occur during breastfeeding. Examples of breastfeeding problems are breast or nipple injuries, pain or discomfort, poor positioning and an incorrect technique. On the other hand, breastfeeding problems were common during exclusive breastfeeding period, mostly due to incorrect positioning and latch (Cadwell et al., 2006, Giugliani, 2004).

Study from Righard (1992), showed that around 94% of the mothers who had breastfeeding problems also had attachment problems and poor infant suckling. Only 10% of the mothers in the group without breastfeeding problems had incorrect positioning and latch-on.

In general, breastfeeding problems could be divided into three categories i.e. related to physical, psychological and technical aspect. The breastfeeding problems came soon after childbirth, and continue during the breastfeeding period.

Table 2.1. Type of breastfeeding problem

Related to physical-technical aspect	Related to psychological aspect
1. Breast engorgement	1. Perception of low milk supply
2. Sore nipples or breasts	2. Feeling tired and fatigued
3. Plugged milk duct	3. Feeling emotionally upset
4. Nipple infection	
5. Mastitis	
6. Flat nipple	
7. Uncommon infant stools	
8. Insufficient infant weight gain	
9. Fuzzy baby	
10. Sleepy baby	
11. Sucking difficulties	
12. Latching problems	
13. Breast refusal	

Source : (Lamontagne et al., 2008, Abou-Dakn et al., 2009, Amir et al., 2007, Februharty et al., 2006, Giugliani, 2004, Mallikarjuna et al., 2002).

2.1.1 Breastfeeding problem related to physical and technical aspects

2.1.1.1 Breast engorgement

Engorgement refers to swollen within the breast tissue, which may be painful. Women with engorgement experienced the breasts became firm, flushed, and warm when touched, and throbbing feeling. Some mothers develop a slight fever, body temperature rise to 38.3°C (Schanler and Enger, 2011).

The engorgement usually occurs around the 3rd to 4th day after delivery and usually is associated with one of the following factors: late initiation of breastfeeding, infrequent breastfeeding, restriction on the duration and frequency of breastfeeding, and poor infant sucking (Giugliani, 2004)

These problems can be prevented by start nursing as soon as possible, breastfeed on demand, use proper breastfeeding technique and avoid the use of supplements (Schanler and Enger, 2011, Giugliani, 2004).

2.1.1.2 Sore nipples

The nipples normally became more sensitive during pregnancy. Nipple soreness normally occurs around 30 to 60 seconds after breastfeeding started, and the greatest may occur around the fourth days after delivery. Nipple injury such as a blister, crack or bruise usually caused pain during the breastfeeding period,

and might be developed due to improper positioning of the infant and inappropriate latch-on (Schanler and Enger, 2011, Giugliani, 2004).

Some action could be taken to prevent sore nipples are as follows (Schanler and Enger, 2011, Giugliani, 2004):

1. Apply a proper breastfeeding technique
2. Breastfeed on demand

2.1.1.3 Plugged milk ducts

Plugged ducts are areas in the breast where milk cannot flow properly due to plugged of skin cells and milk. This often occurs when the breast is not really emptied during feeds, breastfeeding is infrequent or when the infant has limited suckling (Schanler and Enger, 2011, Giugliani, 2004).

To prevent the occurrence of plugged ducts, proper emptying of the breast is needed. Proper breastfeeding technique and frequent breastfeeding could minimize this condition, as well as wearing a proper bra and avoiding the use of unnecessary creams on the nipples (Giugliani, 2004).

2.1.1.4 Nipple infection

Nipple infection is quite common during the breastfeeding period, usually caused by *Staphylococcus aureus* and *Candida albicans*. A study showed that 54% of mothers with infants under one month, with cracked nipple and moderate to severe pain, are positive for *Staphylococcus aureus* (Giugliani, 2004).

Breast infection caused by *Candida albicans* usually occurs in the presence of moist nipples (*Candida* interacts with carbohydrate containing substrates from breastmilk) and of lesions. The nipples usually have a shiny and reddish appearance. Mothers who use antibiotics, oral contraceptives and steroids as well as contaminated pacifiers may have an increased risk of breast candidiasis (Giugliani, 2004).

2.1.1.5 Mastitis

Mastitis is inflammation of the breast due to infection. It usually causes a swollen area of one breast, red, tender, hard and fever more than 38.3°C. Other symptoms are muscle aches, chills, and feeling ill. It usually occurs in the second and third weeks after delivery, and very rarely, after the twelfth week (Schanler and Enger, 2011, Giugliani, 2004).

The preventive action is the same as breast engorgement, plugged ducts and cracked nipple, and so is the early management of these intercurrent diseases (Giugliani, 2004).

Mastitis could be treated by continuing breastfeeding, along with medication for pain control (Schanler and Enger, 2011). Completing emptying of the breast is the most important part of the treatment for mastitis (Giugliani, 2004).

2.1.1.6 Flat or inverted nipple

There are several common breast conditions, which sometimes cause difficulties with breastfeeding; one of them is flat or inverted nipples. Diagnosis and management of these breast conditions are important both to enable mother breastfeed her infant (WHO and UNICEF, 1993).

Concave, flat, or inverted nipples might cause difficulty for baby to latch on. However, the flat or inverted nipple is temporary and usually starts to become normal during the breastfeeding period. If the infant is strong, healthy, full-term and vigorous, he/she may be able to draw out the nipple with ease (WHO and UNICEF, 1993).

2.1.1.7 Infant Stools

In general, breastfed infants pass gas or stool during or after each breastfeeding session, usually during a few weeks after delivery. Around four to six weeks after delivery, the stool frequency usually decreased and might be sudden (Schanler and Enger, 2011).

Meconium is the sticky dark-colored stool that infants usually produced around a few days after birth. The stool of infant's appearance would change during the third to fifth day, and during the fourth days, most of the infants have

four or more stools in a day, although fewer stools may be normal (Schanler and Enger, 2011).

Persistent stools of meconium after the fourth days may indicate that breast milk supply is low or the infant is not receiving an adequate amount of breast milk, even though breast milk is abundant (Schanler and Enger, 2011).

The changes of stool frequency are usually normal if breastfeeding infants have gained weight appropriately and apparently healthy. However, decreased interest in feeding, suckle strength as well as fewer frequent stools may be signs of more serious conditions which require clinical care (Schanler and Enger, 2011).

2.1.1.8 Insufficient infant weight gain

Many signs can be used to identify whether an infant has a good health condition or not, one of them is weight gain. However, sometimes breastfeeding mother does not know how to recognize if her infant has enough weight gain or not. This condition usually forced the mother to complement the breast milk with other foods, such as formula milk (CHP, 2008)

Growth spurts of infant usually occur during 2, 3, and 6 weeks and at 3 and 6 months. However, these are just general guidelines, because some infant has their own unique growth pattern. Mother can only know any weight gain through weight measurement. If an infant weight does not gain according to certain patterns, both the infant and the mother should be checked by the health services, to determine whether slow weight gain is an infant's natural growth pattern or the result of something else (CHP, 2008).

2.1.1.9 Fussy baby

Many mothers feel that she has low milk production, because her baby fusses and cries too much. This situation may trigger mother to start introducing complementary feeding during this time. Introduction of complementary feeding often do not make a baby cry less, on the contrary, sometimes a baby cries more (WHO and UNICEF, 1993).

The relationship between mother and baby could be upset due to the baby cries a lot, and caused tension among other family members. This condition

usually happens between aged 7 to 10 days, 2 to 3 weeks, 4 to 6 weeks, or at 3 months, 4 months, 6 months and 9 months (WHO and UNICEF, 1993).

2.1.1.10 Persistent sleeping baby

The mother should breastfeed on demand, however most babies especially in less than two weeks aged sleep more rather than awake, therefore, the mother should awake her babies at least every two hours to prevent baby dehydrated (Smith, 2008).

Even though, newborns often sleep constantly for hours in a day, however, it does not matter as long as the infant getting his minimum number of feedings during twenty-four hours, indicated by adequate of urine and stool secretion as well as weight gain (Smith, 2008).

2.1.1.11 Suckle difficulties

Infants can suck easily and naturally during breastfeeding. However, sometimes an infant seems to have to learn to suck. Mothers should not give up trying to breastfeed, but at the same time, should not force themselves (or the infant) by incessantly trying to succeed. They should allow themselves and the infants' time to rest and regain strength in between the suckle periods. Usually, the presences of a person whom mother knows, and who is kind and calm is likely to help mother. However, if mothers may prefer to try alone without any help (Asrani, 2011, Cadwell et al., 2006).

An infant sucks out of reflex. To start the suckle reflex, something usually touches the infant's hard palate. Normally, it is the nipple that touches the palate, but it has to be right inside the infant's mouth. If the nipple is very short, it may not position far enough into the mouth to start the reflex. This is one of the reason flat nipples may cause problems in the early days after delivery. Most nipples have the ability to protract for normal suckle. However, some help may be necessary in the first days after delivery (Asrani, 2011, Cadwell et al., 2006).

If mother's breast is engorged, the nipple might flatten and lose the protractility. The infant can only chew on the tip of the nipple, and cannot suck correctly. Consequently, the infant cannot extract milk, and any attempt to breastfeed will harm the nipple instead. The infant will become impatient, cries

and turns from the breast, the despairing mother. On such occasions, the help of a skilled and calm person is needed (Asrani, 2011, Cadwell et al., 2006).

2.1.1.12 Latching problem

Latching on is the way infant takes the nipple and areola into her mouth to suckle. It is the most important aspect of breastfeeding. Without proper latch, the infant will not get the milk that she/he needs and the breasts will not be stimulated to produce more milk. This will start a vicious cycle of poor milk demand and supply. On the other hand, the nipples may become cracked and painful when the latch is not proper (Lawrence and M., 2011).

The proper latch included both the nipple and the surrounding areola, the pinkish-brown flat circle that became darker during pregnancy. Though breast milk comes out of the nipple, the infant's gums need to compress the areola. If not, the breast milk will not flow, and milk will not be produced (Riordan, 2005).

2.1.1.13 Infant refusal to breastfeed

One of the reasons for breastfeeding cessation is the refusal to breastfeed by the infant, this will cause mothers to feel rejected by her infant and increase stress level. The mother must know why her infant is refusing to breastfeed, and how to managed this situation (WHO and UNICEF, 1993).

Some reasons why the infant refuses to breastfeed i.e. Illness, pain, infection or sedation, difficulty with breastfeeding, infant is upset due to separation from the mother (especially aged 3-12 months) and apparent refusal. To manage these problems, the mother or her support system must be treated. If possible, the causes should be minimized or removed. Mother needs support to build her confidence and enjoy breastfeeding again, (WHO and UNICEF, 1993).

2.1.2 Breastfeeding problem related to psychological aspect

2.1.2.1 Perception of low milk supply

Unlike bottlefeeding, breastfeeding is blind, the mother cannot know how much milk they have and how much her infant is taking. That may cause new mothers to wonder: Am I producing enough breast milk? Is my infant getting enough?

Most mothers can produce enough milk and able to feed a baby normally after two weeks or sooner. However, during these few weeks, while mother waits for milk to increase, she needs some support, encouragement, and supervision, so mother will not give up breastfeeding (Asrani, 2011).

Many factors contribute to the way mother face her breastfeeding problem, several of them are exposure of breastfeeding information, cultural and religious belief and community support.

2.1.2.2 Feeling fatigued and tired

Infant is very sensitive to the moods of the mother, and many mothers indicate that they ceased breastfeeding because of fatigue (Callahan et al., 2006). Comfortable feeling can be influenced by the synthesis and secretion of breast milk, due to increased release of oxytocin hormone. Oxytocin increases because of comfortable feeling, reductions of anxiety, and feelings of calmness and safety around the mother (Lawrence and M., 2011, Cadwell et al., 2006, Riordan, 2005).

There are two kinds of fatigue, physical and mental fatigue. The physical fatigue usually caused by night awakening to breastfeed, feeling tired from frequent breastfeeding itself and household chores. To manage mental fatigue, a mother can have time to rest, like sleeping with her infant and relieve her fatigue rather than doing housework while her infant is asleep, and exercising and refreshing with her infant (Callahan et al., 2006).

2.2 Breastfeeding practices

According to the recommendation of WHO those infants should be exclusive breastfeeding. At the age of six months, breastfeeding should be complemented with other foods. Additionally, breastfeeding should begin in the first hour of birth, on demand, as frequently as possible day and night, and bottles or pacifiers should be avoided (WHO, 2011).

Inappropriate feeding within the first six months such as introduce complementary feeding earlier and giving bottle feeding has been discouraged because of adverse effects on nutritional status, morbidity, and mortality of infant (Dibley et al., 2010).

A study from Jones et al., (2003) showed that if 90.0% of mothers practiced exclusive breastfeeding, around 13.0% mortality risk among infants could be prevent.

Therefore, breastfeeding needs to be learned, that is why many women may experience breastfeeding difficulties at the beginning. It is common for new mothers to experience nipple pain, and fear of not able to produce enough milk. Health facilities with trained breastfeeding counselors who can help mothers overcome problems during breastfeeding, encourage greater rates of the breastfeeding practice (WHO, 2011).

There are three kinds of responses when mother faces problems during breastfeeding i.e continue breastfeeding, complement breast milk with formula milk or other food, or stopped breastfeeding (Februhartanty et al., 2006, Abou-Dakn et al., 2009, Hegney et al., 2008, Martindale, 2005).

Continued breastfeeding is the ideal response of a mother who experienced breastfeeding problem. If the mother knows how to manage her problems since early stage when problems occur and receive support from health workers and her community, continued breastfeeding may be possible. However, most mothers manage their problem with themselves and did not receive full support from a health worker (Februhartanty et al., 2006, Giugliani, 2004, Hsi and Leeman, 2010).

2.3 Breastfeeding support

2.3.1 Health services

In Indonesia, a health professional is expected to educate the mother about breastfeeding since the start of antenatal care. Unfortunately, not all the health workers are doing this (Priscilla, 2008). A result from the rapid survey by Asian Development Bank (ADB) in the area NICE project South Sulawesi showed that during 2011, each NICE project area has around 30 lactation consultants, and mostly were coordinators of midwives and few of them were nutritionist. The activity of lactation consultants were only mass campaign (ADB, 2011). On the other hand, sometimes information from the health worker is often not consistent, due to poor knowledge and skill (UNICEF, 2011).

Health worker should not only trained to increase their knowledge regarding management of breastfeeding and lactation, but also to increase their

skills especially in providing counseling and to give correct breastfeeding information to the pregnant and breastfeeding mothers as well as the surrounding mothers (UNICEF, 2011).

A review from UNICEF explained more regarding the attitude of health worker in Indonesia that commonly ignorant toward the consequences of early introduction of the formula milk, due to less knowledge regarding how to manage such breastfeeding problem and might be due to the aggressive marketing of breast milk substitute (UNICEF, 2011).

2.3.2 Family and Community Influences

According to government regulation of South Sulawesi Provinces, number 6 in 2010 regarding exclusive breastfeeding. Families, communities, business entities, and local government should provided supports to the breastfeeding mothers. Type of support includes the provision of breastfeeding time and establishment of breastfeeding facilities (SEKDA, 2010).

The strong dominated social support comes from the family, especially the husband. Study from Februhartanty et al., (2006) showed that fathers could identify if the mothers are tired. Fathers, in addition, can provide assistance in doing household chores and child caring as well as providing other conveniences if needed (Februhartanty et al., 2006).

A review study from UNICEF (2011) showed that the key actors to breastfeeding practice at home are fathers and parents. Fathers commonly influence mothers to decide the infant feeding mode and parent often provided suggestion based on her past experience. However, fathers living in urban areas especially who live as a nuclear family, usually have direct access to infant feeding decision making.

A study from Duong et al., (2004) in Vietnam showed that the husband, mother in laws and friend have a strong effect to encourage the mother for breastfeeding practice, even though not all husbands have a good attitude to support the mother to breastfeed (Duong et al., 2004).

Study among African-American population found that father, family, friend and community member influence the breastfeeding. The method of breastfeeding is mostly affected through the father and family. Insufficient

understanding of the mother is a breastfeeding barrier; therefore, the role of the husband becomes important. The husband who understood about breastfeeding will encourage the mother to breastfeed. Consequently, the mother will feel comfortable and convenient throughout the breastfeeding practice (Rose et al., 2004).

2.4 Breastfeeding Knowledge

Increased knowledge does not always cause changes in behavior. Behavior that is realized by the knowledge will be more lasting than the behaviors that are not based on knowledge. If mothers have good knowledge about breastfeeding, they can be prepared for any breastfeeding difficulties (Morrison et al., 2008).

Generally believed that mothers cease breastfeeding because of physical problems associated with the practice, and that increased breastfeeding knowledge will address these issues (Sheehan et al., 2010).

Several studies found that women from lower socioeconomic backgrounds were more influenced by experiential knowledge through exposure to breastfeeding than theoretical knowledge focusing on breastfeeding skills (Sheehan et al., 2010).

In general, breastfeeding knowledge especially regarding the benefits of breastfeeding was mostly focused on the infant. A review study from UNICEF (2011) found that most breastfeeding knowledge questions addressed issues on benefit of breastfeeding or exclusive breastfeeding, duration of infant should be breastfed, colostrum and its benefit, time to introduce complementary food. Questions regarding breastfeeding problems and support from surrounding of mothers were limitedly explored.

2.5 Exposure to breastfeeding information

The adequate information regarding breastfeeding will help mothers to prevent breastfeeding problem and to help them manage their problems. The information on infant feeding can be given through the media (electronic and print) and education (WHO, 2003).

According to the government regulation of South Sulawesi Provinces, Number 6 in 2010 regarding exclusive breastfeeding, health services institutions

should provide exclusive breastfeeding counseling periodically among pregnant women, maternal and/or postpartum mothers. The material of counseling consists of benefit of colostrum and exclusive breastfeeding. Health services institutions should also distribute communication, information and education (IEC) materials about the benefit of early initiation of breastfeeding. Early initiation of breastfeeding should be facilitated, and mother and baby should be assisted to initiate breastfeeding early (SEKDA, 2010).

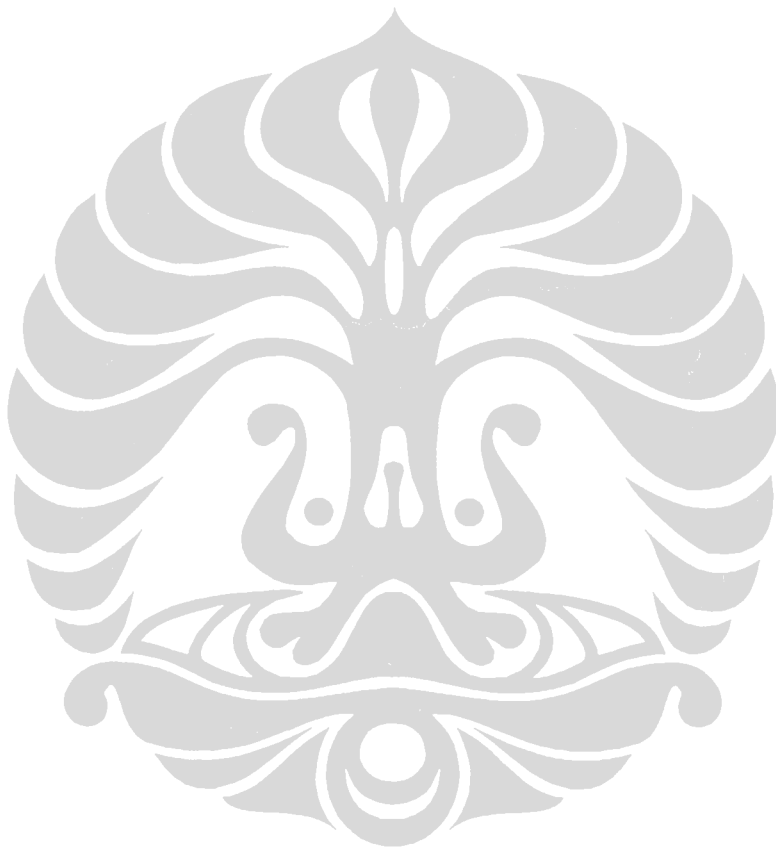
Health workers must have an accurate understanding about breastfeeding, as well as good practical skill, because most mothers need support to understand practical skills to breastfeed especially in several days after delivery (Imdad et al., 2011, Renfrew et al., 2009). The education is not just for the mother, but also for their family especially father and grandmother (Al-Fadli et al., 2004).

Health workers and/or lactation counselors should consistently implementing the seven contact (plus) and ten steps to successful breastfeeding (WHO, 1998). The seven contacts (plus) meaning that health workers and/or lactation counselors should be educating the mother at least seven times, which started since gestational age of mother is 28 weeks and 36 weeks. The next contact is directly after delivery, one hour after delivery, seven days, fourteen days and 39 days after delivery as well as plus once if mothers need information regarding breastfeeding.

The ten steps to successful breastfeeding are following:

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. Practice 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.



CHAPTER 3 METHODOLOGY

3.1 Variable Indicators Matrix (VIM)

Table 3.1. Variable Indicators Matrix of Study

Variable	Indicators	Methods	Subject	References
The experience of breastfeeding problems	<ul style="list-style-type: none"> • Type and time breastfeeding problems occurred • Coping mechanism • Breastfeeding practices 	Structured Interview	Mother	(Lamontagne et al., 2008, Giugliani, 2004, Mallikarjuna et al., 2002, Februhartanty et al., 2006) (WHO, 2010a)
Health services	<ul style="list-style-type: none"> • Existing breastfeeding program and counselor • Activity report of lactation counselor 	In-depth interview, observation	Midwives/ Nutritionist, health facilities	(WHO, 2003, SEKDA, 2010)
Family and community support	<ul style="list-style-type: none"> • The person who support • Type of support 	Structured Interview	Mother	(Duong et al., 2004, Rose et al., 2004)
Breastfeeding knowledge	<ul style="list-style-type: none"> • Duration of breastfeeding • Breastfeeding problems 	Structured Interview	Mother	(Ismail and Sulaiman, 2010)
Exposure of breastfeeding information	<ul style="list-style-type: none"> • Time frame • Venue/location • The person who deliver information • Content of information • Perceived mothers with the information 	Structured Interview	Mother	(WHO, 2003, Renfrew et al., 2009, Imdad et al., 2011)
Characteristics of mothers and infant	<ul style="list-style-type: none"> • Characteristics of mothers • Characteristics of infant 	Structured interview, Anthropometry	Mother, infant	Senarath, 2010, Gibson, 2005 WHO, 2006

3.2 Study design and time

The design of the study was a cross sectional study using quantitative approach. In addition in-depth interview and observation was also conducted to complement the finding. The data collection conducted in February to April 2012.

3.3 Study Area

Maros district is a semi-urban area, located around 15-20 km from Makassar. Maros district consist of 14 sub district, and this study was conducted in two sub district in Maros District, South Sulawesi Province, i.e. Turikale and Lau Sub district. The area is selected purposively using two criteria, the width of the area and numbers of infants aged 6-12 months.

3.3.1 Geographical Data

Turikale sub-district's area is 29.93 km², consist of 7 villages, and the width of Lau sub district area around 49.11 km² and consist of 6 villages. All of the areas in both sub districts are accessible (Statistical board, 2011).

3.3.2 Demographic data

The total population of Turikale sub district in 2010 was 41319 people, consist of 19964 male and 21355 female, and number of households around 8651. The sex ratio was 93.0% and the population density was 1381 people/km², and most of people are Bugis-Makassar ethnic (Statistical board, 2011).

Lau sub district has around 24.201 people, consist of 11850 male and 12351 female. The sex ratio was 92%, number of households was 5331, the population density was 450 people/km², and most of people are Bugis-Makassar ethnic (Statistical board, 2011).

3.3.3 Nutrition situation and exclusive breastfeeding practice

In 2010 , Turikale sub district has 1 hospital, 1 primary health centers (Puskesmas), 8 private doctor, 14 private midwife, 3 village health posts (Poskesdes), and 8 integrated health posts (Posyandu). On the other hand, Lau sub district has 3 Puskesmas pembantu, 6 village health posts (Poskesdes), and 14 integrated health posts (Statistical board, 2011).

According to RISKESDAS data in 2007, the prevalence of underweight in Maros district was 16.8%, stunting 27.8% and wasting 21.7%. The prevalence of exclusive breastfeeding was 33.01%.

3.4 Subjects of the study

The populations under study were mothers having infant age 6-12 months (incomplete month). The inclusion criteria of the subject are a permanent resident in the area as indicated by:

- a. Having singleton and full term infant with minimum weight at birth of ± 2500 gram
- b. Infant and mother were apparently healthy
- c. The mothers were willing to participate

In addition, the coordinator of midwife, lactation counselor, and the nutritionist were also interviewed to clarify the existing breastfeeding program.

3.5 Sample size and sampling procedure

3.5.1 Sample size

The sample size for quantitative approach was calculated by estimating a population proportion using an absolute precision (Lwanga & Lemeshow, 2001).

$$n = \frac{Z_{1-\alpha/2}^2 * p * (1-p)}{d^2}$$

Note:

- α = level of confidence (95%)
- p = estimated proportion, used in this study were the proportion of mothers who have breastfeeding problem (87.3%) (Februhartanty et al., 2006)
- d = largest difference of the estimated proportion that could be accepted, used in this study was 5%.
- n = the calculated sample size (171 mothers)

The minimum sample size is 171 mothers, and a 20% drop out anticipation, so the total sample is 205 mothers.

3.5.2 Sampling procedure

3.5.2.1 Selection of sub district

The study area was determined purposively using two criteria with scoring system (ranged from 1-14) i.e. width of the area and numbers of infants aged 6-12 months, due to limited time and budget, and result of the score calculation is as follows:

Table 3.2. Criteria of selecting sub-districts

Sub-district	Result of the scoring				Total score
	Width of area (km ²) ¹	Score	Number of infants aged 6-12 months ²	Score	
Turikale	29.93	14	452	13	27
Lau	49.11	12	453	14	26
Mandai	73.83	9	419	12	21
Maros Baru	53.76	10	329	10	20
Marusu	53.73	11	305	8	19
Bontoa	93.52	7	324	9	16
Moncongloe	46.87	13	155	3	16
Bantimurung	173.70	4	381	11	15
Tanralili	89.45	8	292	6	14
Simbang	105.31	6	295	7	13
Camba	145.36	5	150	2	7
Tompobulu	287.66	1	178	5	6
Mallawa	235.92	2	156	4	6
Cenrana	180.97	3	135	1	4

¹Source of data: Statistical board (2011); scored from smallest (1) to largest (14)

²Source of data: health profile of Maros district (2011); scored from smallest (14) to higher (1)

Based on table 3, Turikale sub district is selected as a study area, however during the house-to-house screening, only around 88.0% from the minimum sample could be met in this area, therefore, the second highest score were selected to provide an adequate sample size (Lau sub district). All the data from both sub districts were combined as a sampling frame.

3.5.2.2 Selection for sample

- a. House-to-house screening was performed to recruit mothers having an infant aged 6-12 months, due to lack of information regarding the number and profile of infants aged 6-12 months in Posyandu. Screening was conducted in 54 sub villages in the study area and only one sub village cannot be accessed due to flood.
- b. Random selection were performed using a software.
- c. Mothers, who were not in her house or out of the village when the enumerator came for the interview, were revisited the next day. Reserve sample is selected if after second visit the enumerator cannot meet the mother..

The flow chart of sampling procedure as following:

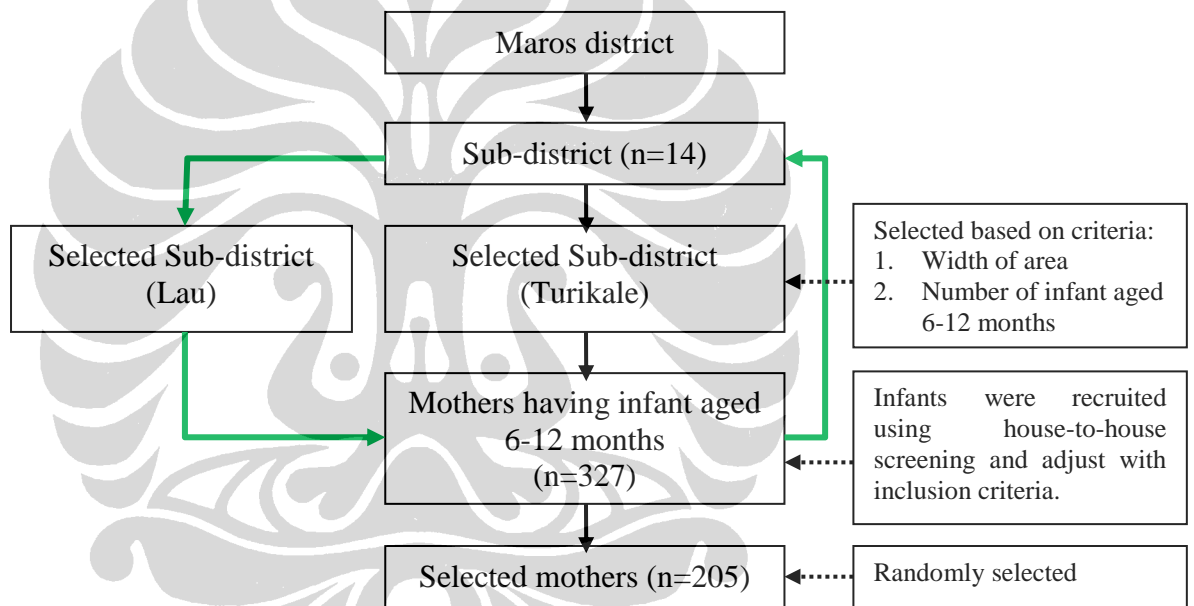


Figure 3.1. The flow chart of sampling procedure

3.6 Data collection procedures

3.6.1 Preparation phase

Flash card was used as the research tools, to help mothers recall her previous experience around 6 or 12 months. The activities in the preparation phase consist of development and production of tools as described below.

3.6.1.1 Development of tools

Developments of flash cards were performed through two stages i.e., Understanding the concept of breastfeeding problems and production of flash card. This stage involved several activities such as literature review, discuss with lactation counselors as well as mothers having infant aged 0-6 months, as described in the following flow chart:

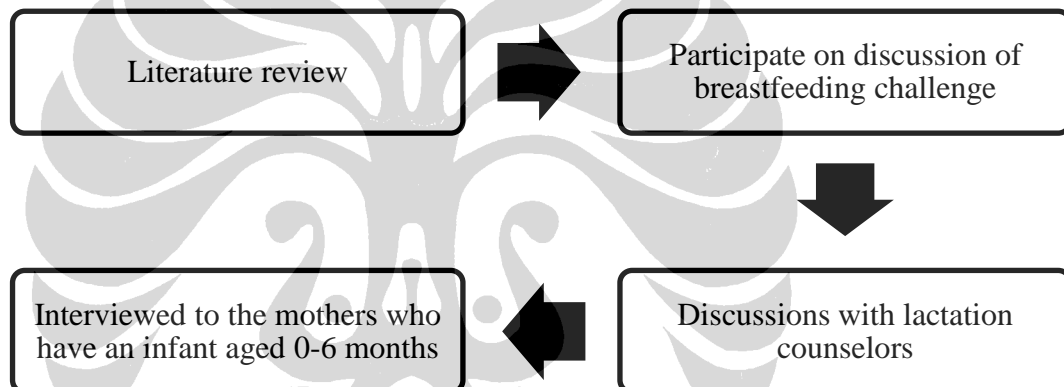


Figure 3.2. The flow chart of understanding the concept of breastfeeding problems

Information obtained through literature review are mostly about the type of breastfeeding problems within the six months and lack of information regarding the type of breastfeeding problems based on age of infants and when the problems started occurring. Therefore, researcher participates in discussion of breastfeeding challenge conducted by *Asosiasi Ibu Menyusui Indonesia (AIMI)* and also discussed with a lactation counselor from Nutrition Department, Health Polytechnic of Makassar to find out the type of breastfeeding problems based on age of infants. In addition, mothers of infant aged 0-6 months were interviewed to obtain more comprehensive information regarding the type of breastfeeding problems.

Based on the above process, the type of breastfeeding problems divided into three age categories i.e., when infant aged 0-1 months period, 1-3 months

period and 3-6 months period. Those three categories are critical periods of breastfeeding. The period of 0-1 month is an adaptation stage between mother and infant, the period of 1-3 months is critical for working mothers and the period 3-6 months is a transition period between breastfeeding and introduction of complementary feeding. This period grouping is also considered helpful in facilitating mothers to recall her breastfeeding problems.

According to the previous activities as a preliminary study i.e. literature review, discuss with lactation counselors as well as mothers having infant aged 0-6 months. Several problems were found only occurred within the first month after delivery, while others occurred after the first month and several problems persistent within the six months. The list of breastfeeding problems based on age of the infant and categories of problems are explained in the following table.

Table 3.3. The list of breastfeeding problems based on age of the infant and categories of problems¹

Categories of problems	Age of Infants		
	Age 0-1 month	Age 1-3 months	Aged 3-6 months
Related to physical and technical aspect	1. Sore nipple*	1. Sore nipple*	1. Sore nipple*
	2. Sick mother*	2. Breast engorgement*	2. Breast engorgement*
	3. No milk production*	3. Nipple infection*	3. Nipple infection*
	4. Icterus neonatum**	4. Sick infant**	4. Sick infant**
	5. Cesarean section*	5. Insufficient infant weigh gain**	5. Insufficient infant weigh gain**
	6. Breast engorgement*	6. Constipation**	6. Constipation**
	7. Fuzzy baby**	7. Flat or inverted nipple*	7. Flat or inverted nipple*
	8. Nipple infection*	8. End of maternity leave*	8. Busy mother *
	9. Sick baby **	9. Busy mother *	9. Sick mother*
	10. Not rooming-in*	10. Sick mother*	10. Improper breastfeeding position*
	11. Sleepy baby**	11. Improper breastfeeding position*	11. Infant refusal to breastfeed**
	12. Flat or inverted nipple*	12. Infant refusal to breastfeed**	
	13. Improper breastfeeding position*		
	14. Latching difficulties*		
Related to psychological aspect	15. Tired and fatigued mother*	13. Low milk supply*	12. Low milk supply*
		14. Tired and fatigued mother*	13. Tired and fatigued mother*

*Mother centered; **Infant centered

Persons were involved in understanding the concept of breastfeeding problems as the following table.

Table 3.4. Persons who contributed in the stage of understanding the concept of breastfeeding problems

Background/profession	Institution/Location	Relevance to the study
Lactation counselors	Asosiasi Ibu Menyusui Indonesia (AIMI)	To obtain information regarding the type of breastfeeding problems commonly experienced by mothers during the first six months after delivery
	Lecturer in Nutrition Department, Health Polytechnic of Makassar	To obtain information regarding the type of breastfeeding problems commonly found in the field, especially in Makassar
Mothers who have an infant aged 0-6 month	Jakarta and South Sulawesi Provinces	To obtain information regarding the type of breastfeeding problems, which they currently experienced

After obtaining the type of breastfeeding problems above, the next process is tools production. The stages of tools production described in the following flow chart:

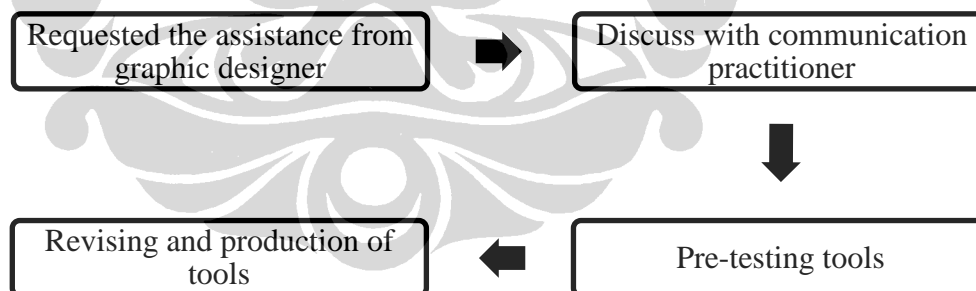


Figure 3.3. The flow chart of tools production

Two graphic designers assisted the creation of the pictures about breastfeeding problems as helping aid during an interview to mothers. The researcher also discussed with communication practitioners about how to use the tools effectively. Communication practitioner suggested that every picture should be added with explanatory text. For optimum result, each picture should also be

shown to the mothers one by one according to each age period. Flash cards were then developed as an additional tool during the interview.

Pre-testing was conducted in Jakarta to understand the responses of mothers regarding each image in the flashcards. The results of pre-tested are mothers easier to recall the experience of breastfeeding problems if the text explanation is printed on each picture of the flash card. The researcher conducted the final layout and production of flash card.

The flash card was divided into three parts i.e., Breastfeeding problems in the period of 0-1 month, 1-3 months and 3-6 months. Each sheet consists of some information as follows (**see appendix 7**):

1. The title, the period of breastfeeding problems
2. Page number as a code of breastfeeding problem
3. Illustration of breastfeeding problems in the form of picture
4. Description of the picture was placed below the picture

The following procedure was given to enumerator when using the flash card to obtain information about the experience of breastfeeding problems:

1. Enumerators reminded mothers that the questions were divided into three parts i.e., When infant aged 0-1 month, 1-3 months and 3-6 months.
2. Enumerators showed the picture one by one, followed with explanation about each picture according to the guidelines (**see appendix 6**)
3. All responses of mothers were recorded on the questionnaire.

Persons who contributed during tool production are listed in the following table.

Table 3.5. Persons who contributed during tool production

Background/profession	Institution/Location	Relevance to the study
Graphic designer	Jakarta	Created a picture of breastfeeding problems
Communication practitioner	Bandung	Provided information how to choose the tools and how to use it.
Mothers who have infant aged 6-12 months	Jakarta	Provided responses of mothers regarding the tool

3.6.1.2 Recruitment and training of enumerators

The present study recruited six enumerators for house to house screening and makes a list of mother having infant aged 6-12 months in the study area and four enumerators for field data collection. All the recruited enumerators graduated from nutrition academy, fluent in the local language, *Bugis* or *Makassar*, as well as *Bahasa* and have previous experience in conducting the nutrition field study.

For sampling, enumerators were trained regarding how to fill in the sampling form. For field data collection, enumerators were trained to ensure similarity in using the questionnaire, flashcard tools and performing the anthropometrics measurement.

The questionnaire and flash card tools were pre-tested twice by each enumerator to two different mothers. According to the result of the pre-tested, some explanation of picture in flash card should be revised because of mother's difficulty to understand. To minimize recall bias, the researcher provided a guideline regarding how to ask each question and how to use the flash cards.

3.6.2 Data collection phase

3.6.2.1 Interview using a questionnaire

The interview was carried out for three weeks to 205 mothers and conducted by four local enumerators, one of them is male. Enumerator interviewed each mother around 30 to 45 minutes using structured questionnaire

and flash card. All interviews were conducted in mother's house with convenient situation. The stages of the interview were as follows:

1. Enumerators read informed consent, if the mother agrees, she signed the informed consent
2. Each question was asked by enumerators in sequences
3. The Flash card was used only when enumerators asked about the experience of breastfeeding problems
4. All responses were recorded into the questionnaire

Daily monitoring and supervision was conducted by principal investigator and one supervisor. Completeness of questionnaire was checked daily and problems faced during data collection were discussed.

3.6.2.2 Anthropometric assessment

Measurement of body weight and length of infant was conducted by two trained persons. Body weight of infants were measured by using SECA electric weight scale and for length using length board.

To avoid the systematical error, all weighing scales were calibrated every day before conducting measurements. To reduce the intra and inter observer error, all measurements were performed twice and based on WHO standard procedure (WHO, 2006).

The stages of body weight assessment as following:

1. The scale was placed on a hard flat surface and checked for zero-balance
2. Calibrated the measurement
3. Mothers stood in the center of the platform (the two feet should be on the rubber mat of the scale), looking straight forward and to stand relax.
4. Infants with minimal clothes were held by the mother, and enumerators asked mother to minimize her movement and still looking straight
5. The measurement result was noted by enumerators.
6. The measurement result was noted by enumerators to the nearest 0.1 kg

The stages of length measurement as following:

1. The length board placed on a hard flat surface
2. The first examiner was applied gentle traction to bring the crown of the head into contact with the fixed headboard and position of the head was vertical
3. Placed infant with face upward, head at the fixed end of length board, body parallel to the board's axis and shoulders rest against the surface of the board
4. The second examiner held the feet of the infant, without shoes and diaper, toes pointing directly upward, while knees kept straight and brought the movable footboard to rest against the heels
5. Enumerators recorded the result into the nearest centimeter

3.6.2.3 In-depth interview

In-depth interview was done by principle investigator to the five health workers, consist of three midwives and two nutritionists. From the five health worker, there were lactation counselors. Each key informant interviewed around 60 to 70 minutes. The aim of in-depth interview is to obtain information about breastfeeding program and activities of lactation counselors.

3.6.2.4 Observation

Observation was carried out at the four *Posyandu* and two *Puskesmas*, the observation was conducted by principal investigator during field data collection and in-depth interview. The aim of the observation is to identify the type of breastfeeding promotion materials and the content of those materials, especially information regarding breastfeeding problems.

3.7 Data entry, cleaning and analysis

Data entry, cleaning and analysis performed using SPSS for Windows version 13.0. Multiple analysis based on the percentage of cases was done to find out proportion type of breastfeeding problems, breastfeeding practices, coping mechanism, the people who supported and type of supported during mothers experienced the breastfeeding problems. Descriptive analysis was used to describe distribution characteristics of the subject and other factors. Data normality was

confirmed by Kolmogorov-Smirnov test. A *p value* of 0.05 was used as the threshold for significance and two sided.

Categorization of variables related to the experience of breastfeeding problems by mothers as follows:

3.7.1 The experience of breastfeeding problems

Some information in the present study i.e., Type of problems, coping mechanism, people who supported, type of support and breastfeeding practices when the breastfeeding problems experienced by the mothers are either multiple responses or composite, therefore a further categorization is needed. The categorization of variables related to breastfeeding problems as follows:

Table 3.6. Categorization of variables related to breastfeeding problems

Variables	Categories
Type of breastfeeding problems	<ul style="list-style-type: none"> • The top five of breastfeeding problems
Coping mechanism	<ul style="list-style-type: none"> • Look for assistance • Self treatment • Did not do anything
People who supported	<ul style="list-style-type: none"> • Husband • Parent/parent-in-law • Family member • Neighbors/friend • Health worker • Traditional healer/dukun
Type of support	<ul style="list-style-type: none"> • Helped to take care the infant • Provided advices • Helped to treatment the problems
Breastfeeding practices	<ul style="list-style-type: none"> • Continued breastfeeding • Mixed feeding • Stopped breastfeeding temporary • Substituted with formula milk/other food

3.7.2 Overall of breastfeeding outcome

According to the table 3.6, especially variable of breastfeeding practices, further categorization was conducted to identify the proportion of mothers giving only breast milk to her infant when they experienced breastfeeding problems, with categories as follows:

1. Sustain breastfeeding practice, if mothers only gave breast milk
2. Mix feeding practice, if mothers gave any liquid or solid food

3.7.3 Breastfeeding Knowledge

Breastfeeding knowledge consists of 10 questions, four of them regarding duration of breastfeeding and six of them are the breastfeeding problems, as following:

Table 3.7. The correct answer of breastfeeding knowledge

Type of questions	Questions number	Questions	The correct answers
Duration of breastfeeding	1	According to you, Until what age an infant should be breastfed?	Two years or beyond
	2	According to you, Until what age an infant should be given only breast milk?	Six months
	3	According to you, How frequent baby should be breastfed?	On demand
	4	According to you, at what age the baby should be introduced to complement food?	At 6 months
Breastfeeding problems	5	According to you, What influences the breast milk production?	Duration/frequency of breastfeeding and emotional condition of the mother
	6	According to you, How should the breastfeeding practice if the mother has any breastfeeding problems?	Continued
	7	According to you, What causes breast engorgement?	Restriction on the duration and frequency of breastfeeding
	8	According to you, What causes sore nipple?	Improper positioning and inappropriate latch-on
	9	According to you, What causes breast refusal by the baby?	Using pacifier and or baby got illness
	10	According to you, What causes an insufficient infant weight gain during the breastfeeding period?	Unoptimal intake and frequent illness

The scoring system was used for categories of breastfeeding knowledge, the score ranged from 0-10. The categorization of breastfeeding knowledge as follows (Februhartanty et al., 2006):

1. Good if the score above the median (5-10)
2. Low if the score below the median (0-4)

3.7.4 Nutritional status of infant

Nutritional status of the infants in this study is the current nutritional status. The value was determined using WHO software version 3.2.2 January 2011. The categorization of nutritional status of infants described on the table 3.8.

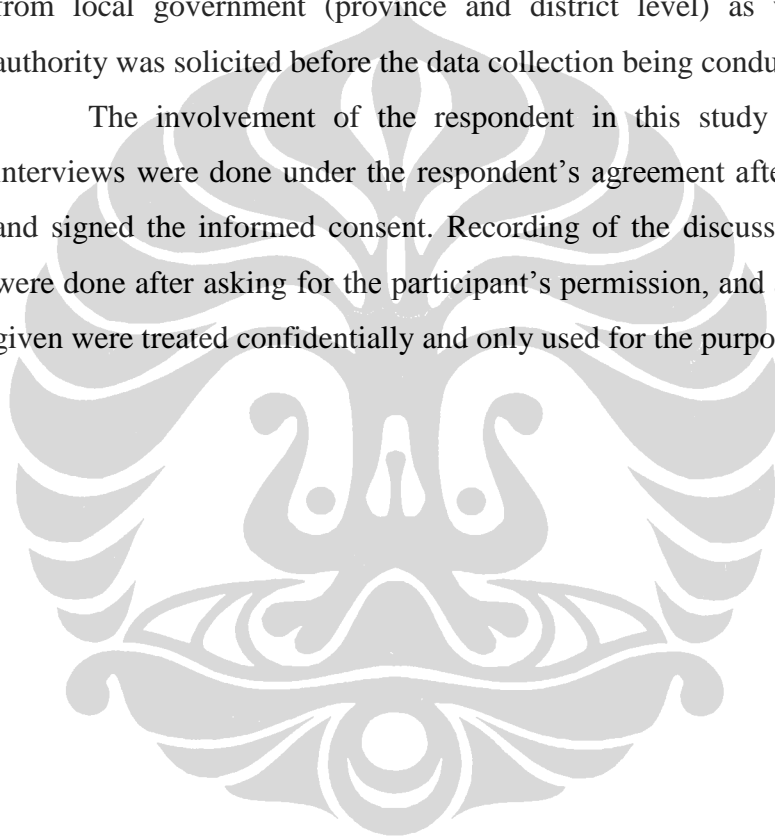
Table 3.8. Categorization of nutritional status of infant (WHO, 2006)

Z-Score	Cutoff	Categorization
Weight-for age	< -2 SD	Underweight
Height-for-age	< -2 SD	Stunting
Weight-for-height	< -2 SD	Wasting

3.8 Ethical consideration

This study was conducted after obtaining an Ethical Clearance from Ethical Committee of Medical Faculty of University of Indonesia. Permission from local government (province and district level) as well as local health authority was solicited before the data collection being conducted.

The involvement of the respondent in this study was voluntary. The interviews were done under the respondent's agreement after they have received and signed the informed consent. Recording of the discussions and information were done after asking for the participant's permission, and all of the information given were treated confidentially and only used for the purpose of this study.



CHAPTER 4

RESULTS

4.1 Socio-demographic characteristics

This study selected 205 mothers from 327 eligible mothers in two sub district, i.e. Lau sub district and Turikale sub district, Maros district South Sulawesi Provinces.

Most of the mothers and their spouses were still on productive age, below 55 years old. Parent tended to have a high education level, most of them completed basic education level, and more than 50% of mothers did not work.

Proportions of male and female infant were equal. Most mothers have previous breastfeeding experienced (multiparous), and two indicators of nutritional status of infants showed public health problems (Gibson, 2005).

Table 4.1. Characteristics of mothers and infant

Characteristic	Statistics
Mothers(n=205)	
Age of mother (years) ¹	28 (18-47)
Education of mother (≥ 9 years) ²	117 (57.07)
Occupation of mother (working) ^{2,5}	34 (16.59)
Household size (persons) ¹	6 (3-9)
Number of underfive cared by the mother (≥ 2 person) ²	81 (39.51)
Parity (Multiparous) ²	142 (69.27)
Infants (n=205)	
Sex (male) ²	112 (54.6)
Age of infant (months) ¹	9 (6-12)
Nutritional status ²⁻⁴	
Underweight (n=202)	36 (17.7)
Stunting (n=202)	64 (31.7)
Wasting (n=203)	12 (5.9)

¹median (min-max); ²n(%); ³Current nutritional status; ⁴Three mothers decline to measure her infant; ⁵Civil servant, private employee, shop seller, farmer, laborer.

4.2 The experience of breastfeeding problems

4.2.1 Type of breastfeeding problems and time of problems occurred

The flash card helped us to identify the type and time the breastfeeding problems occurred, and most of mothers tended to easier recall her breastfeeding problems.

The present study showed that all mothers (n=205) have experienced breastfeeding problems during the first six months after delivery. However, when age of the infant is divided into three categories, i.e., Infant aged 0-1 month, 1-3 months and 3-6 months, around 8 (3.9%), 39 (19.0%) and 42 (20.5%) of mother respectively did not have any breastfeeding problems, as described in the following figure.

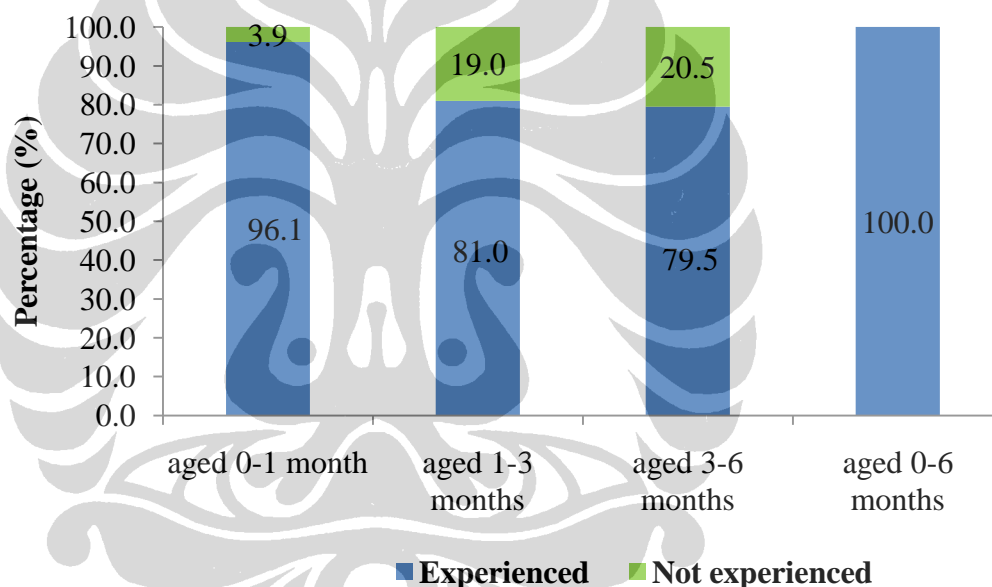


Figure 4.1. Percentage of breastfeeding problems experienced by mother at 0-1 month, 1-3 months and 3-6 months period

The top five of breastfeeding problems when infant aged 0-1 month, 1-3 months and 3-6 months shows on table 4.2. There are five breastfeeding problems persistently emerged within the six months of infant's age, i.e. Sore nipple, tired and fatigued mothers, breast engorgement, the sick baby and infant refusal to breastfeed. There are some problems which only occur at the first month i.e. No milk production and sleepy baby, and there are some problems starting to occur after the first month i.e. Low milk supply, busy mother and constipation. Most breastfeeding problems were related to physical - technical aspects.

Table 4.2. The type of breastfeeding problem experienced by mothers during the first six months

Type of breastfeeding problems ¹	At the period of ²		
	0-1 month (n=197)	1-3 months (n=166)	3-6 months (n=163)
Sore nipple ^{a,*}	113 (57.4)	21 (12.7)	15 (9.2)
No milk production ^{a,*}	103 (52.3)	-	-
Tired and fatigued mother ^{b,*}	62 (31.5)	59 (35.5)	54 (33.1)
Breast engorgement ^{a,*}	55 (27.9)	20 (12.0)	7 (4.3)
Sleepy baby ^{a,**}	50 (25.4)	-	-
Sick baby ^{a,**}	23 (11.7)	77 (46.4)	109 (66.9)
Low milk supply ^{b,*}	-	53 (31.9)	51 (31.3)
Mother was busy ^{a,*}	-	25 (15.1)	22 (13.5)
Infant refusal to breastfeed ^{a,*}	27 (13.7)	24 (14.5)	17 (10.4)
Constipation ^{a,**}	-	20 (12.0)	19 (11.7)

¹Multiple response; ²n(%); ^aRelated to physical-technical aspect; ^bRelated to psychological aspect
*Mother centered; **Infant centered

Table 4.2 also describes that the fifth breastfeeding problems occurred in the period 0-1 month are sore nipple, no milk production, tired and fatigued mother, breast engorgement and sleepy baby. Whereas, for 1-3 and 3-6 months most common problems were sick baby tired and fatigued mother, low milk supply, mother was busy, infant refuse to breastfeed and constipation.

4.2.2 Breastfeeding practices during the experience of breastfeeding problems

Even though most of mothers experienced breastfeeding problems, however breastfeeding practices were continued. Limited proportion of mothers practiced mixed feeding, stopped breastfeeding temporarily, and or substituted with formula milk/other foods, as described in the table 4.3.

Table 4.3. Breastfeeding practices when mother experienced breastfeeding problems during the first six months

Breastfeeding practice ¹	At the period of ²		
	0-1 month (n=197)	1-3 months (n=166)	3-6 months (n=163)
Continued breastfeeding	148 (75.1)	111 (66.9)	99 (60.7)
Mix feeding	48 (24.4)	45 (27.1)	65 (39.9)
Stopped breastfeeding temporary	76 (38.6)	7 (4.2)	4 (2.5)
Substituted with formula milk/other foods	12 (6.1)	20 (12.0)	24 (14.7)

¹Multiple response; ²n (%)

According to the table 4.3, further categorization performed to identify the proportion of mothers giving only breast milk to her infant when they experienced breastfeeding problems, as described on the following table:

Table 4.4. The overall of breastfeeding practices when mother experience breastfeeding problems during the first six months

Breastfeeding practice	At the period of ¹		
	0-1 month (n=197)	1-3 months (n=166)	3-6 months (n=163)
Sustain breastfeeding practice	79 (38.5)	99 (48.3)	72 (35.1)
Mix feeding practice	118 (57.6)	67 (32.7)	91 (44.4)

n (%)

Table 4.4 above described that from 148 mothers continued breastfeeding practice when they experience breastfeeding problems at the period of 0-1 months (table 4.3), only 79 (38.5%) of them sustained breastfeeding practice or giving only breast milk when they experience breastfeeding problems.

The proportion of mother sustained breastfeeding practice at period of 1-3 months and 3-6 months also decreasing from 111 mothers to 99 mothers and 99 mothers to 72 mothers, respectively.

However, mothers who continued breastfeeding practice at the period of 0-1 months have possibility to practice mix feeding or still continued breastfeeding at the period 1-3 months and 3-6 months.

Therefore, a further categorization performed to identify the proportion of mother giving only breast milk when they experienced breastfeeding problems from first period until to third period.

The further categorization showed that only 22.9% of mothers giving only breast milk when they experienced breastfeeding problems from the first period until to the third period.

4.2.3 The coping mechanism of breastfeeding problems

Look for assistance is the most responses mothers when they experienced breastfeeding problems, whether in the first, second and third period, as described in the table 4.5.

Table 4.5. The coping mechanism of a breastfeeding problem experienced by mothers during the first six months

Coping mechanism ¹	At the period of ²		
	0-1 month (n=197)	1-3 month (n=166)	1-3 month (n=163)
Look for assistance	167 (84.8)	142 (85.5)	144 (88.3)
Self treatment	102 (51.8)	76 (45.8)	57 (35.0)
Did not do anything	47 (23.9)	5 (3.0)	32 (19.6)

¹Multiple response; ²n(%)

4.2.4 The person who provided support and type of support

There are many potential resources that could help mothers to cope her problems, whether family related or not. Table 4.6 showed that health worker and parent/parent-in-law were mostly mentioned as the party who provided help to mothers when they experienced breastfeeding problems, whether when infant aged 0-1 month, 1-3 months or 3-6 months.

Type of support provided by health worker and parent/parent-in-law mostly related to advices when infant aged 0-1 month and helped treat the problems when infant aged 1-3 months and 3-6 months, as described on the table 4.6.

Table 4.6. People who provided support and type of supported during the first six months

Person and type of support ¹	At the period of ²		
	0-1 month (n=167)	1-3 months (n=142)	3-6 months (n=144)
Person who provided support			
Husband	22 (13.2)	11 (7.7)	10 (6.9)
Parent/parent-in-law	69 (41.3)	55 (38.7)	54 (37.5)
Sister/aunt/daughter or son	17 (10.2)	20 (14.1)	15 (10.4)
Neighbor/friend	8 (4.8)	2 (1.4)	2 (1.4)
Health worker	103 (61.7)	81 (57.0)	93 (64.6)
Traditional healer	4 (2.4)	3 (2.2)	2 (1.4)
Type of support			
Helped to take care the infant	66 (39.5)	68 (47.9)	57 (39.6)
Provided advice	124 (74.3)	55 (38.7)	47 (32.6)
Helped to treat	52 (31.1)	79 (55.6)	96 (66.7)

¹Multiple response; ²n (%)

4.3. Breastfeeding knowledge

Table 4.7 showed that around 77.1% mothers have good knowledge regarding breastfeeding duration. However, only 37.6% mothers understand the causes of several breastfeeding problems. On the other hand, overall of breastfeeding knowledge is good (83.9%), as described in the following table:

Table 4.7. The level of breastfeeding knowledge

Breastfeeding knowledge (n=205)	n (%)
Knowledge of breastfeeding duration, Good	158 (77.1)
Knowledge of breastfeeding problems, Low	128 (62.4)
Overall of breastfeeding knowledge, Good ^{1,2}	172 (83.9)

¹Cronbach's Alpha=0.476; ²Knowledge of breastfeeding duration and breastfeeding problems

4.4 The Exposure of breastfeeding information

The low proportion of mother ever received breastfeeding counseling (27.3%), and most of the counseling received by mother after delivery might cause a lack of knowledge of the mother.

Nutritionist and midwives provided the information, and the information delivered through lecture and practice method. Most mothers mention that the information given was important and useful. However, this information could not increase breastfeeding knowledge of mothers.

The types of information received by the mother were exclusive breastfeeding, the benefit of breast milk and proper breastfeeding positions. There is limited information about how to manage breastfeeding problems.

Table 4.8. The exposure of breastfeeding information

The exposure of breastfeeding information	n (%)
Ever received breastfeeding counseling (Yes) ¹	56 (27.3)
Time frame ²	
After delivery	34 (60.7)
Before delivery	22 (39.3)
Venue/facility ²	
Hospital/Puskesmas	1 (1.8)
Posyandu	43 (76.8)
Others	12 (21.5)
Person who deliver information ²	
Doctor	2 (3.6)
Midwife	21 (37.5)
Nutritionist	21 (37.5)
Cadres	12 (21.4)
Method of message delivery	
Lecture	13 (23.2)
Lecture with simulation ²	43 (76.8)
Mother's impression with the content of information ²	
As needed/useful	52 (92.9)

¹n=205; ²n=56

Based on the finding of this study, there are some variables interesting to further analysis by using bivariate analysis (Chi-square), although this analysis is not one of the objectives this study, however, the result of analysis might be support the finding of this study. Those variables were breastfeeding knowledge, exposure of breastfeeding information, number of breastfeeding problems and parity with sustained breastfeeding practices when mother experienced breastfeeding problems.

Table 4.9 showed that mothers who sustained breastfeeding practices have good breastfeeding knowledge, low exposure to breastfeeding information, experienced more than two breastfeeding problems and the parity status was multiparous. However, Only breastfeeding knowledge has a significant correlation with sustained breastfeeding practices, as described in table 4.9.

Table 4.9. The proportion of several variables with breastfeeding practices when mothers experienced breastfeeding problems

Variables	Breastfeeding practices when mothers experienced breastfeeding problems	
	Mixed feeding (n=153)	Sustained breastfeeding (n=52)
Breastfeeding knowledge ^{*)}		
Low	30 (19.0)	3 (6.4)
Good	128 (81.0)	44 (93.6)
Exposure of breastfeeding information		
Yes	41 (25.9)	15 (31.9)
No	117 (74.1)	32 (68.1)
Number of breastfeeding problems ^{**)}		
> 2 problems	143 (90.5)	38 (80.9)
≤ 2 problems	15 (9.5)	9 (19.1)
Parity		
Primiparous	52 (32.9)	11 (23.4)
Multiparous	106 (67.1)	36 (76.6)

*) Chi-square: $p=0.039$, $\alpha=0.05$; **) Chi-square: $p=0.071$, $\alpha=0.05$

Further analysis using logistic regression (Enter method) was conducted to assess the correlation of several variable with sustained breastfeeding practices i.e. Breastfeeding knowledge, a number of problems and parity.

Good of breastfeeding knowledge is significantly associated with sustained breastfeeding practices ($p<0.05$) and the value of odds ratio (OR) is 3.601. Even though experienced by less than two breastfeeding problems is not significantly associated with sustained breastfeeding practices, however the value of odds ratio (OR) showed that the variable could support sustainable breastfeeding practices in twice.

Table 4.10. Summarized table of multivariate analysis of factors with sustained breastfeeding practices during the first six months after delivery.

Variables	OR	95%CI for OR	p
Good level of breastfeeding knowledge	3.601	1.039 to 12.476	.043
Experience of less than two breastfeeding problems	2.190	0.867 to 5.531	.097
Primiparous family	0.626	0.291 to 1.345	.230

4.5 Health services

4.5.1 Existing breastfeeding programs

Most of the breastfeeding programs implemented were mass education and display of breastfeeding promotion posters. Some villages have mother class, however, the program is limited to the NICE project area, as the quote from the coordinator of nutritionist and midwives as following:

“Just mass education (penyuluhan), we have mother class but only in NICE project area” (Nutritionist with 9-years experience)

“Just mass education, there is no other program” (midwife with 5-years experience)

The mother was still the main target of the breastfeeding programs, even though, sometimes, mother/mother-in-law also joined this program.

“The participants of breastfeeding program are mothers, her husband never attended, almost only mothers” (Nutritionist with 25-years experience)

“Only mothers of infant and her mother/mother-in-law” (midwife with 13-years experience)

There are two types of program delivered, counseling, and simulation using *boneka* (puppet), however, not all Puskesmas have *boneka*, while the Puskesmas that have, only one *boneka* available.

“Poster, boneka, sometimes using pictures” (Nutritionist with 9-years experience)

“Yes, only mass education (penyuluhan), there is no simulation because we do not have educational tools” (Nutritionist with 25-years experience)

Exclusive breastfeeding, early initiation, and proper breastfeeding position were the most frequent topics presented, and only a small part of breastfeeding problems. Health worker said that when they explained about exclusive breastfeeding, usually they also explained about several problems during breastfeeding.

“Early initiation of breastfeeding, the myth around breastfeeding, and also breastfeeding positioning and proper latch on” (Nutritionist with 9-years experience)

“Exclusive breastfeeding, early initiation of breastfeeding, I never gave specific information regarding breastfeeding problems, for instance sore nipple, however, usually when I gave mass education to the mothers, one topic included all the breastfeeding information (Nutritionist with 25-years experience)

“Usually exclusive breastfeeding, breast care, according to me, when I gave the topic of exclusive breastfeeding, all the breastfeeding information was included (midwife with 13-years experience)

4.5.2 Lactation Counselor

Each Puskesmas in Maros have at least two lactation counselors, however, job description of the lactation counselor was still unclear. Lactation counselors admitted never introduced themselves as a lactation counselor. They went to the community only as an ordinary health worker.

“I never claimed as a lactation counselor, however, I usually said to the mothers, called me please if you have any problems” (Nutritionist with 9-years experience)

“Never, I am never introducing myself as a lactation counselor, because we do not have the self confidence to claim as a lactation counselor” (Nutritionist with 25-years experience)

Lactation counselors have joined five days lactation counseling training, conducted by Department of Health South Sulawesi Provinces. The training materials consisted of exclusive breastfeeding, the benefit of breastfeeding, and several problems during a breastfeed.

“I joined the training only 3 days in Maros, at 2007, There are many topics in lactation counselor training, exclusive breastfeeding, breastfeeding positions, sore nipple, low milk supply, and etc” (Nutritionist with 9-years experience)

“I joined the training around 5 days at 2010, and the training topics such as breastfeeding technique, sore nipple, and so on. There are so many topics, all the questions have the education materials” (Nutritionist with 25-years experience)

“I joined the training around 5 days at 2005 in Pare-Pare. Most of the training topics were breastfeeding technique, breastfeeding simulation, breast engorgement, and etc.” (Midwife with 14-years experience)

The breastfeeding problem was often asked by mothers i.e., No milk production, low milk production and sore nipple.

“Usually no breastmilk have been produced, low milk supply, sore nipple, like that” (Nutritionist with 9-years experience)

“Usually only low milk supply, sore nipple, and etc.” (Nutritionist with 25-years experience)

“Usually why my breast milk was low, the mother feels their breast milk was rancid” (midwife with 13-years experience)

There is no reporting mechanism regarding activities of lactation counselors, mostly her activities were done on a voluntary basis.

“There is no report system, only exclusive breastfeeding from Posyandu” (Nutritionist with 9-years experience)

“There is no report for counselor activities, only regular report of exclusive breastfeeding from Posyandu” (Nutritionist with 25-years experience)

“No sir, the only report of growth monitoring and exclusive breastfeeding from Posyandu” (midwife with 13-years experience)

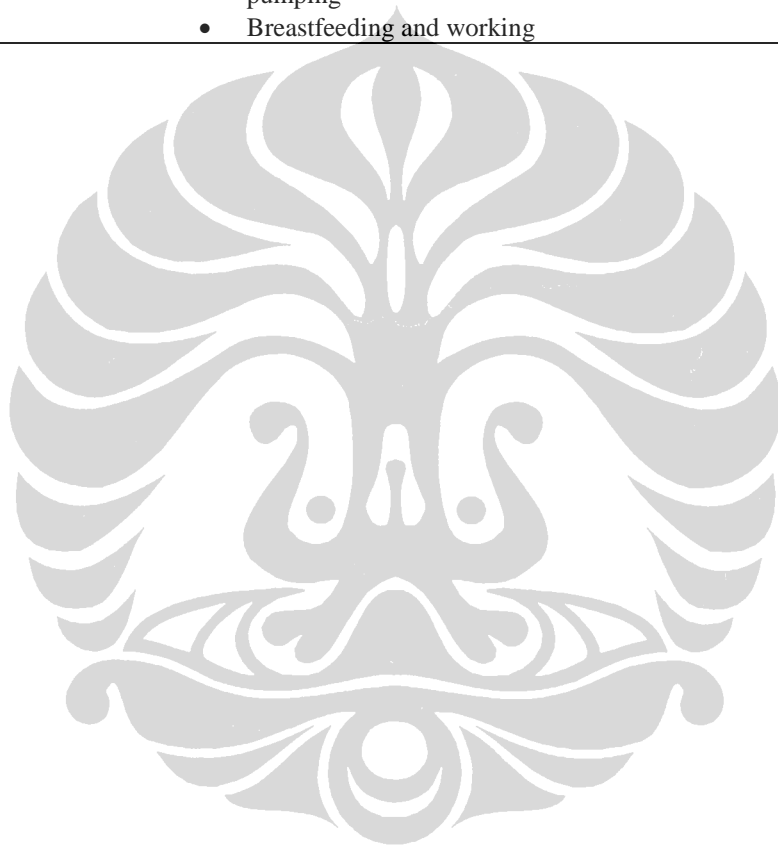
4.5.3 Observation result of IEC materials

There are three types of IEC materials available at four Posyandu and two Puskesmas being observed, i.e., Posters, leaflets and breastfeeding module. The messages in the IEC materials consist of exclusive breastfeeding, early initiation of breastfeeding and the benefit of exclusive breastfeeding. Even though there is a lack of information regarding breastfeeding problems, however, breastfeeding module have some information about how to prevent recurrence of breastfeeding problems. The table 4.11 summarized the content of breastfeeding messages observed in the IEC materials.

Table 4.11. Content of breastfeeding messages in the observed IEC materials

Type of material	Content of material	Produced	Location
Poster	<ul style="list-style-type: none"> • Exclusive breastfeeding • Early breastfeeding initiation • The benefit of exclusive breastfeeding 	<ul style="list-style-type: none"> • Ministry of Health and NICE Project • Department of health South Sulawesi Province and NICE Project • Department of Health South Sulawesi Province 	Posyandu
Leaflet	<ul style="list-style-type: none"> • Exclusive breastfeeding • Early initiation breastfeeding • Definition and benefit of early breastfeeding initiation • The stage of early breastfeeding initiation • The benefit of skin-to-skin contact between mother and infants 	<ul style="list-style-type: none"> • Nestle • Department of Health South Sulawesi Province and NICE Project 	Puskesmas 50 sheet each Puskesmas, however not all puskesmas have this leaflet
	<ul style="list-style-type: none"> • Exclusive breastfeeding and problems • Definition of exclusive breastfeeding • Definition of colostrums • Benefit of colostrums • Benefit of breastfeeding • Duration of breastfeeding • How to increase milk production • Factors contributing to successful breastfeeding • How to breastfeeding correctly 	<ul style="list-style-type: none"> • Department of Health South Sulawesi Province and NICE Project 	50 sheet each Puskesmas, however not all Puskesmas have this leaflet
Breastfeeding module	<p>Consist of 25 modules as follow:</p> <ul style="list-style-type: none"> • What and how to early initiation breastfeeding • The stage of early breastfeeding initiation • The myth and fact of early breastfeeding initiation • The immune system of newborns baby • The true story from Pakistan • The myth and fact of breastfeeding • The reasons exclusive breastfeeding is important • The child rights • Introduction of breast • How breast milk is produced • How to read growth chart • Increasing body weight • Eating because of hunger 	<ul style="list-style-type: none"> • USAID Indonesia and Ministry of Health 	One package, however not all puskesmas have this module. The module is addressed for health professional

Type of material	Content of material	Produced	Location
	<ul style="list-style-type: none">• The type and benefit of breast milk• The stage of breastfeeding• How to make baby breastfeed easily• Proper latching• Communicating with baby• Low milk production• Expressing breast milk with hand• The stage of breast milk pumping• Breastfeeding and working		



CHAPTER 5

DISCUSSION

5.1 Type of breastfeeding problems, time of problem occurred and breastfeeding practices

This study managed to explain the types of breastfeeding problems, but wider information regarding timing when the problems occur, the person whom supported mothers, type of supports and the breastfeeding practice when mother experienced breastfeeding problems were also described.

The research tool developed to help the researcher to identify time and type breastfeeding problem occurred. Most mothers able to tell about experienced breastfeeding problems based on the picture shown to them.

The present study showed that most mothers experienced breastfeeding problem at the first month after delivery and the proportion was slowly decreased to 3-6 months period. This result in line with a study by Malika et al. (2002), showed that 31.7% mother experienced breastfeeding problems in the first month after delivery and decreasing to 25.6% in the sixth month after delivery.

The first month after delivery is adaptation phase between mothers and infant. In this period, some mothers try to learn how to breastfeed properly. Therefore many breastfeeding problems arisen in this period.

If mothers cannot manage her breastfeeding problems as well as lack of support from health worker or her environment, they are likely giving other food to their infants. Therefore, the existence of support in this period is needed, at least can help and motivated mothers to still breastfeeding as well as to minimize the breastfeeding barriers.

The top five of breastfeeding problems experienced by mothers in the present study mostly relate to a physical-technical aspect as well as psychological aspect. This result in line with a study by Lamotagne et al. (2008) in Quebec-Canada, showed that the three most frequent breastfeeding problems experienced by the mother were sore nipple/breast, latching difficulties and low milk supply. On the other hand, a study by Febrihartanty et al. (2006) in Jakarta showed that the top four breastfeeding problems, mostly related to psychological aspect such

as feeling emotionally upset, feeling tired and fatigued and perceived milk insufficiency.

The previous studies limitedly explained regarding the pattern of breastfeeding problems in term of the occurrence, source and the potential support of problems (Lamontagne et al., 2008, Abou-Dakn et al., 2009, Amir et al., 2007, Februhartanty et al., 2006, Giugliani, 2004, Mallikarjuna et al., 2002). However, the present study has identified patterns of breastfeeding problems experienced by mothers. For instance, based on the occurrence, there are five breastfeeding problems persisted in the 0-6 period, two problems only occurred in the first month period and three problems occurred after the first month. Based on source of problems, there are four breastfeeding problems related to the mothers and infants respectively, and based on potential support consist of medical and non medical potential support.

The breastfeeding problems related to physical-technical aspect such as sore nipple, normally occurs around first 30 to 60 seconds during breastfeeding (Schanler and Enger, 2011, Giugliani, 2004), breast engorgement and no milk production were normally occurs around the 3rd to 4th day after delivery (Giugliani, 2004). Those problems usually associated with one of the several factors such as late initiation of breastfeeding, infrequent breastfeeding, restriction on the duration and frequency of breastfeeding, and poor infant sucking (Giugliani, 2004). Therefore, assistance from health worker or lactation counselor is needed to minimize the problems.

Several breastfeeding problems such as tired and fatigued mothers, perception of insufficient breast milk and mother was busy, most of them occurring at the period 1-3 months and 3-6 months. Those problems actually inter related each others. For instance, during the two or three months after delivery, usually the mothers were slowly begun involved in household chores and this situation will be affecting to the physical and the psychological condition of the mother. Unbalanced of physical and psychological condition usually indicated by emerging of feeling tired and fatigued would be influencing the breast milk production.

All breastfeeding problems were not managed properly tended to negatively associated with breastfeeding practice. Previous studies showed that mothers who have at least one breastfeeding difficulty were more likely not succeeded exclusive breastfeeding and have a shorter duration of breastfeeding (Lamontagne et al., 2008, Abou-Dakn et al., 2009, Amir et al., 2007, Februhartanty et al., 2006, Giugliani, 2004, Mallikarjuna et al., 2002, Hsi and Leeman, 2010), as well as the present study showed that only 22.9% of mother's sustained breastfeeding practice when they experienced breastfeeding problems within the first six months after delivery.

The high proportion of undernourished among infant in the present study, might be due to breastfeeding problems were not well managed, and finally affect to the nutrient intake of an infant during the first six month period after delivery, and in the long term effect to the nutritional status of infant.

According to the explanation above, showed that all breastfeeding mothers have the same opportunity to suffer breastfeeding problems, whether in developed and developing countries, and most of them tended to low rate of exclusive breastfeeding practices, that distinguishes might be only in the support system when mother experienced breastfeeding problems.

Developed countries have better support system rather than developing countries because of higher government commitment to promote exclusive breastfeeding as well as the education level of communities.

5.2 The coping mechanism and support

Mothers tended to look for assistance as a coping mechanism when they experienced breastfeeding problems, whether in the period 0-1 month, 1-3 months and 3-6 months. This confirmed that mothers have awareness to solve her problems.

Health worker and mother/mother-in-law are identified as the people who supported mothers when they experienced breastfeeding problems. Type of supports ranges from only provided advice up to provide help to treat the problem. This result in line with studies in West-Berlin, Germany and Quebec-Canada showed that most mothers helped by midwives, family and friends when they

experienced breastfeeding problems (Lamontagne et al., 2008, Abou-Dakn et al., 2009).

Even though the education level and socio-economic status of mothers is different, however, the potential supports in developed countries or developing countries more or less are the same sources i.e. from health worker and family members.

Based on the potential support, breastfeeding problems could be divided into two groups i.e., Medical (midwives, nutritionist and lactation counselor) support and non-medical (mother/mother-in-law and husband) support.

Type of breastfeeding problems persisted in the 0-6 month period which needed medical support are sore nipple, breast engorgement and the infant refusal to breastfeed as well as the condition when the baby is sick, no milk production (typically occurred in 0-1 month), as well as low milk supply and constipation (typically for 1-6 months). Whereas the breastfeeding problems were related to psychological aspect or non-medical support i.e. Tired and fatigued mothers, sleepy baby and busy mothers.

The present study showed that in the study area health worker and lactation counselors are potential supporters, because each village has a village midwife and each Puskesmas has at least two lactation counselors. However, only two health worker has participated on lactation counselor training, and unfortunately most of lactation counselors did not carry out their duties properly, due to reasons low confidence to claim as lactation counselors, lack of report system for lactation counselor activities.

The previous study showed that each NICE project area in South Sulawesi, included Maros District has around 30 lactation counselors, and most of them are coordinators of midwives and a few of them were nutritionist. The activity of lactation counselor only mass campaign (ADB, 2011).

Health workers and lactation counselors were not done what they should be done, due to the role of lactation counselors still unclear, as well as the quality of lactation counselors training is still questionable, because the training of lactation counselor about 2 years ago is not yet adopted the competence of lactation counselor, therefore, Sentra Laktasi Indonesia (SELASI) at 2011 has

published a 40 hours module of lactation counselor training included competence for lactation counselor.

On the other hand, health workers were required have an accurate understanding about breastfeeding, as well as good practical skill, because most of mothers need support to understand practical skills to breastfeed especially in several days after delivery (Imdad et al., 2011, Renfrew et al., 2009).

According to a review from UNICEF explained that health worker in Indonesia that commonly ignorant toward the consequences of early introduction of the formula milk, due to less of knowledge regarding how to manage such breastfeeding problem and might be due to the aggressive marketing of breast milk substitute (UNICEF, 2011).

Some strategic programs are needed furthermore to empower the lactation counselors, such as reinforce their skills and knowledge by training, regular evaluation of lactation counselor activities, increase their skills especially in providing counseling and to give correct breastfeeding information to the pregnant and breastfeeding mothers as well as the surrounding of mothers (UNICEF, 2011).

However, not all breastfeeding problems have to be burden of the health workers or lactation counselors, because some breastfeeding problems can be managed by family members especially by mothers and husbands, those problems such as tired and fatigued mothers, sleepy baby and busy mothers could be managed by family member.

The present study showed that mother/mother-in-law is the most people who supported mothers and the second is husbands. This finding in line with study held by Priscilla (2008) in West Sumatra that grandmothers have an important role in the decision breastfeeding practice. That means mothers from *Padang* ethnic and *Bugis-Makassar* ethnic at least have a same pattern in term of potential support from family members i.e. mother/mother-in-law.

On the other hand, one of *Bugis-Makassar* culture is mother/mother-in-law usually accompany mother during delivery process until around one month after delivery. During those period, mother/mother-in-law usually helping household chores as well as provide assistance to take care of baby.

In general, most of mothers in Maros District were living in the extended families. Eventhough the mothers were living in the nuclear family, however, mpthers usually build a house not far from their house parents/parents-in-law, stiiil in the one village as well as one sub district.

This calls for the department of maternal and child health to give more attention to mother/mother-in-law and husband as one of the alternative targets of breastfeeding program, especially in terms of keeping a good situation at home, reducing the stress factor of mothers, sharing the work, and help taking care infant.

5.3 Breastfeeding knowledge and the exposure of breastfeeding information

Information and knowledge about breastfeeding have the strongest influenced to help mothers cope with problems and affect the duration of breastfeeding. For the mothers, the accessibility of breastfeeding information is important, particularly access to the person with the right skills and ability to support breastfeeding (WHO, 2003). Therefore, sometimes-good knowledge about breastfeeding is not followed by the right practice.

The present study showed that 83.9% of mothers have good level of breastfeeding knowledge. However, only 13.7% of mothers have good level of knowledge regarding breastfeeding problems.

The previous study showed that more than 90.0% of working mother and non working mothers respectively in Depok have good level of breastfeeding knowledge (Wibowo et al., 2008). On the other hand, a review study from UNICEF (2011) found that most of breastfeeding knowledge questions of the studies in Indonesia addressed to issues on benefit of breastfeeding or exclusive breastfeeding, and questions regarding breastfeeding problems and support from surrounding of mothers were limitedly explored.

Whereas the knowledge of regarding breastfeeding problems especially type of problems, when the problems start occur and who is potential support are very important, because those information, might be helping health worker to provide support as well as mothers to find potential support when they experience breastfeeding problems.

According to further analysis using logistic regression in the present study showed that good level of breastfeeding knowledge (OR=2.1) and experience of less than two breastfeeding problems (OR=3.6) were most associated to sustained breastfeeding practice. This means, if the mothers have good level of breastfeeding knowledge and the number of breastfeeding problems less than two, they tended to sustain breastfeeding practices, and vice versa.

Counseling or *penyuluhan* is the one of strategy to improve the breastfeeding knowledge of mothers. However, the issue is not only who is deliver information, but wider to the availability of correct information (UNICEF, 2011).

Even though the Government regulation of South Sulawesi Province, Number 6 in 2010 regarding exclusive breastfeeding, stated that health services institution should conduct exclusive breastfeeding counseling periodically among pregnant women, maternal and/or post-partum mothers, however, the present study showed that most of mothers received breastfeeding information from midwives and a nutritionist after delivery in Posyandu.

Previous study also showed that not all of the health workers in West Sumatera educate the mother about breastfeeding since the start of antenatal care (Priscilla, 2008).

That means some area in Indonesia still have a big problem in term of promoting exclusive breastfeeding practice, and the seven (plus) contact as well as the ten steps to successful breastfeeding are not well implemented.

IEC materials are one of the main components of breastfeeding promotion, however, the amount is limited, and the content does not describe tips for mothers when breastfeeding problems occurred. The present study found that IEC materials such as poster and leaflet were limited. Leaflet for instance, only function as an aid during mass education (*penyuluhan*), not intended as take home materials.

The content of breastfeeding messages based on IEC materials were observed i.e. Exclusive breastfeeding practice, early initiation of breastfeeding and the benefit of exclusive breastfeeding, and less explanation about

breastfeeding problems. Unfortunately not all Puskesmas have Breastfeeding education module.

The Government regulation of South Sulawesi Province, Number 6 in 2010 regarding exclusive breastfeeding also did not clearly state breastfeeding problems. The regulation stated that the material of counseling consists of early initiation of breastfeeding, benefit of colostrum and exclusive breastfeeding (SEKDA, 2010). Might be this is the reasons why the content of IEC breastfeeding materials lack of information regarding breastfeeding problems.

However, in general the Government regulation of South Sulawesi Province has stated about what to do as well as punishment for those who violate, however, the regulation has not been socialized evenly.

Furthermore, a strategy is needed to socialize the regulation evenly, increase quality of IEC materials in terms of content and availability. The topic of breastfeeding problems should be given through *Penyuluhan* and counseling with the same proportion with other breastfeeding topics such as the benefits of breastfeeding, initiation of early breastfeeding, etc., with the expectation, mothers could receive the comprehensive information regarding breastfeeding practices.

The present study has several strengths such as described more comprehensive regarding breastfeeding problem, in term of when the problems occurred, type of breastfeeding problems, breastfeeding practices of mothers when they experienced breastfeeding problems, coping mechanism of mothers and support system. This study also was used a tool that helped researchers to identify the type of breastfeeding problems.

The limitation of the present study i.e., validation of the research tools especially for flash card is not based on the explorative studies and the flash cards are not giving opportunity to the mothers to share other breastfeeding problems besides stated on the flash card.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

1. Around 96.1%, 81.0% and 79.5% of mother experienced breastfeeding problems at the period of 0-1 month, 1-3 months and 3-6 months respectively, and sore nipple, tired and fatigued mothers, breast engorgement, the sick baby and infant refusal to breastfeed are the problems persisted within the six months. No milk production and sleepy baby are the problems only occur at the first month. Low milk supply, busy mother and constipation are the problems starting occur after the first month.
2. More than 80.0% of mothers are coping her problems by looking for assistance at all three periods.
3. More than 60% mothers mentioned health worker and 35 % mentioned parent/parent in law as the key supporters when breastfeeding problem occurred. Type of support was assisting mothers to care for her infant, providing advice about breastfeeding problems and help treating the problems
4. Even though more than 60.0% of mother continued breastfeeding practices while experienced breastfeeding problems, only 25.4% of mothers sustained breastfeeding practices within the first six months.
5. About 51.2% of mothers have good breastfeeding knowledge.
6. Only 27.3% mother claimed ever- received breastfeeding information. Method of information delivery was part of the breastfeeding promotion using mass health education. Almost no breastfeeding materials available put an explanation about breastfeeding problems. On the other hand, lactation counselors have not performed their role in delivering breastfeeding promotion info for mothers. They also did not position their selves as source of info to help mothers dealing with breastfeeding problems.

6.2 Recommendations

1. Recommendation for department of maternal and child health.
 - a. Empowerment of lactation counselors through regular meeting and training to increase their skills especially in providing counseling.
 - b. Determine the roles and functions of lactation counselor by including the counseling activities as an indicator of the performance of health workers
 - c. Give more attention to the mother/mother-in-law and husband by involving them in breastfeeding promotion and increasing their ability to help mothers cope her breastfeeding problems especially for non-health related problems.
 - d. To prevent emerging of the breastfeeding problems, health worker and lactation counselor should be provide information regarding breastfeeding problems as well as exclusive breastfeeding practice before delivery and following at least until the first month after delivery.
2. Recommendation for department of health promotion. IEC breastfeeding materials should be enriched with messages and issues of breastfeeding problems, especially information regarding how to manage the problems, due to many mothers experience breastfeeding problems and most of them tended to mix feeding.
3. Improvement of the research tools as an aid in the breastfeeding counseling.
4. Further study is needed to determine the effect of education of breastfeeding problems during pregnancy on the ability of mother to cope her breastfeeding problems and breastfeeding practices in the first month after delivery.
5. Further study is needed to determine the effect of IEC breastfeeding materials after enriching with messages and issues of breastfeeding problems on knowledge of mother can cope with breastfeeding problems.

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THE EXPERIENCE OF BREASTFEEDING PROBLEMS
DURING THE FIRST SIX MONTHS PERIOD
AMONG MOTHERS HAVING INFANTS AGED 6-12 MONTHS

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1 ABSTRACT

2 *Objective:* This study was aimed to describe the experienced of breastfeeding
3 problems during the first six months after delivery.

4 *Design:* A cross sectional study using structured interviews

5 *Setting:* Two sub district in Maros District, South Sulawesi Provinces, Indonesia

6 *Subjects:* Mothers of 205 infants aged 6-12 months were randomly selected

7 *The results:* The study found that most breastfeeding problems occurred in the
8 period 0-1 month, and mothers tended to look for assistance to cope her problems.
9 When mothers experienced breastfeeding problems health staff and
10 mother/mother-in-law were the most supportive, by providing advise and help to
11 treat. Although most mothers continued breastfeeding practice when experiencing
12 breastfeeding problems, however only 22.9% of mothers sustain breastfeeding
13 practices within the first six months. Mother ever received breastfeeding
14 information about 27.3%. Method of information delivery was part of the
15 breastfeeding promotion using mass health education. Almost all breastfeeding
16 materials available did not put an explanation about breastfeeding problems, and
17 lactation counselors have not performed their role in delivering breastfeeding
18 promotion to mothers and did not position their selves as source of info to help
19 mothers dealing with breastfeeding problems.

20 *Conclusions:* Breastfeeding problems were very commonly experienced by the
21 mother during the first six months after delivery and tended to decrease the rate of
22 exclusive breastfeeding practice. Furthermore, there are needs to empower
23 lactation counselor and enrich breastfeeding IEC materials with issues regarding
24 how to deal with breastfeeding problems.

25

26 **Keywords:**

27 Breastfeeding problems, breastfeeding practices, exposure of information,
28 breastfeeding IEC material, breastfeeding support.

29

30

1 INTRODUCTION

2 Breast milk is the natural food that provides all the nutrients, available at
3 any time and affordable during the 0-6 months. Infant can obtain adequate intake
4 through proper breastfeeding practice¹

5 Many mothers consider that breastfeeding is easy, because it is as a natural
6 process and easy to practice. However, breastfeeding is often proven challenging,
7 so that mothers, especially those encounters with problems need to learn the right
8 way.

9 Breastfeeding problems may relate to breastfeeding cessation, shorter
10 breastfeeding periods or complement breastfeeding with formula milk/other food.
11 Previous studies showed that mothers who have not experienced breastfeeding
12 problems, are more likely to practice exclusive breastfeeding rather than mothers
13 who have experienced at least one breastfeeding difficulty²⁻⁸

14 Previous studies have identified the type of common problems during the
15 first six months after delivery. However, information regarding when the
16 problems occurred, how mothers managed and how her problems were responded
17 to being explored limitedly.

18 This study managed to explain the types of breastfeeding problems, but
19 wider information regarding timing when the problems occur, the person whom
20 supported mothers, type of supports and the breastfeeding practice when mother
21 experienced breastfeeding problems were also described

22 Therefore, the result of this study will be useful for the department of
23 health and her stakeholders to improve exclusive breastfeeding promotion,
24 particularly how to interact with the mothers in a nonjudgmental and supportive
25 way to assist exclusive breastfeeding practices and to plan and evaluate
26 appropriate interventions to improve breastfeeding duration.

27

28 METHODS

29 Study design and subjects

30 A cross sectional study was conducted on February until April 2012 to 205
31 randomly selected mothers having infants aged 6-12 months were using structured
32 interviews. The inclusion criteria of the subject are a permanent resident in the

1 area as indicated by having singleton and full term infant with minimum weight at
2 birth of ± 2500 gram, as well as infant and mother were apparently healthy and the
3 mothers were willing to participate.

4 **Study area**

5 This study was conducted in two sub district, Maros district, South
6 Sulawesi Province, because the prevalence of exclusive breastfeeding practice in
7 Maros district was still low, lower than the national target. Selection of two sub
8 district was determined using two criteria i.e. Width of the area and numbers of
9 infants aged 6-24 months. This criterion used to accommodate the limited time
10 and budget.

11 **Data collection procedures**

12 *Development of research tools*

13 A Flash card was used as the research tools to help mothers recall her
14 breastfeeding problems. Developments of flash cards were performed through two
15 stages. The first stage understands the concept of breastfeeding problems and the
16 second stage is production of flash card.

17 In the first stage, several parties were involved such as lactation counselor
18 and mother having an infant aged 1-6 months. That party helped researcher to
19 obtain information regarding to the type of breastfeeding problems commonly
20 experienced by mothers during the first six months after delivery.

21 In the second stages, several persons who contributed were graphic
22 designers, to create a picture of breastfeeding problems. Communication
23 practitioner provided information how to choose the tools and how to use it and
24 mothers who have infant aged 6-12 months provided responses of mothers
25 regarding the tool

26 The same procedure was given to enumerator when using the flash card to
27 obtain information about the experience of breastfeeding problems i.e.,
28 Enumerators reminded mothers that the questions were divided into three parts
29 i.e., When infant aged 0-1 month, 1-3 months and 3-6 months. Enumerators
30 showed the picture one by one, followed with explanation about each picture
31 according to the guidelines, and All responses of mothers were recorded on the
32 questionnaire.

1 ***Recruitment and training enumerators***

2 The present study four enumerators for field data collection. All the
3 recruited enumerators graduated from nutrition academy, fluent in the local
4 language, *Bugis* or *Makassar*, as well as *Bahasa* and have previous experience in
5 conducting the nutrition field study.

6 Enumerators were trained to ensure similarity in using the questionnaire
7 and flash card tools. The questionnaire and flash card tools were pre-tested twice
8 by each enumerator to two different mothers. To minimize recall bias, the
9 researcher provided a guideline regarding how to ask each question and how to
10 use the flash cards.

11 ***Data collection***

12 The interview was carried out for three weeks to 205 mothers and
13 conducted by four local enumerators. Each mother was interviewed by enumerator
14 around 30 to 45 minutes using structure questionnaire and flash card. All
15 interview was conducted in mother's house with convenient situation.

16 The stages of interviews i.e., Enumerators read informed consent, if the
17 mother agrees, she signed the informed consent. Each question was asked by
18 enumerators in sequences. The Flash card was used only when enumerators asked
19 about the experience of breastfeeding problems and all responses were recorded
20 into the questionnaire

21 Daily monitoring and supervision was conducted by principal investigator
22 and one supervisor. Completeness of questionnaire was checked daily and
23 problems faced during data collection were discussed.

24 ***In-depth interview***

25 In-depth interview was done by principle investigator to the three lactation
26 counselors. Each key informant interviewed around 60 to 70 minutes. The aim of
27 in-depth interview is to obtain information about breastfeeding program and also
28 activities of lactation counselors

29 ***Observation***

30 Observation was carried out at the four *Posyandu* and two *Puskesmas*, the
31 observation was conducted by principal investigator during field data collection
32 and in-depth interview. The aim of the observation is to identify the type of

1 breastfeeding promotion materials and the content of those materials, especially
2 information regarding breastfeeding problems.

3 **Data analysis**

4 Data analysis performed using SPSS for Windows version 13.0. Multiple
5 response analysis based on the percentage of cases was done to find out
6 proportion type of breastfeeding problems, breastfeeding practices, coping
7 mechanism, the people who supported and type of supported during mothers
8 experienced the breastfeeding problems. Descriptive analysis was used to describe
9 distribution characteristics of the subject and other factors. Data normality was
10 confirmed by Kolmogorov-Smirnov test. A *p value* of 0.05 was used as the
11 threshold for significance and two sided.

12 Further categorization was conducted to identify how many mothers still
13 sustained breastfeeding when they experienced breastfeeding problems, with
14 categories as follows:

15 1=Sustain breastfeeding if mothers did not give any liquid or solid food to her
16 infants

17 0=Mixed feeding if mothers gave any liquid or solid food to her infants

18 **Ethical consideration**

19 The ethical Clearance of the study was approved by the Medical Faculty of
20 University of Indonesia. Permission from local government (province and district
21 level) as well as local health authority was solicited before the data collection
22 being conducted. The involvement of the respondent in this study was voluntary.

24 **RESULTS**

25 **Socio-demographic characteristics**

26 Most of the mothers and their spouses were still on productive age, below
27 55 years old. Parent tended to have a high education level, most of them
28 completed basic education level, and more than 50% of mothers did not work.
29 Most mothers have previous breastfeeding experienced (multiparous), and
30 proportions of male and female infant were equal (table 1)

31

1 **Type of breastfeeding problems**

2 The flash card helped this study to identify type and when the
3 breastfeeding problems occurred, and most of mothers tended to easier recall her
4 breastfeeding problems.

5 All mothers have experienced breastfeeding problems during the first six
6 months after delivery. However, when age of the infant is divided into three
7 categories, i.e., Infant aged 0-1 month, 1-3 months and 3-6 months, around 8
8 (3.9%), 39 (19.0%) and 42 (20.5%) of mother respectively did not have any
9 breastfeeding problems, as described in the figure 1.

10 The top five of breastfeeding problems when infant aged 0-1 month, 1-3
11 months and 3-6 months shows on table 2. There are five breastfeeding problems
12 persist emerged within the six months of infants age, i.e. Sore nipple, tired and
13 fatigued mothers, breast engorgement, the sick baby and infant refusal to
14 breastfeed. There are some problems which only occur at the first month i.e. No
15 milk production and sleepy baby, and also there are some problems starting to
16 occur after the first month i.e. Low milk supply, busy mother and constipation.
17 Most breastfeeding problems were related to physical - technical aspects.

18 Table 2 described that the fifth breastfeeding problems occurred in the
19 period 0-1 month are sore nipple, no milk production, tired and fatigued mother,
20 breast engorgement and sleepy baby. Whereas, for 1-3 and 3-6 months most
21 common problems were sick baby tired and fatigued mother, low milk supply,
22 mother was busy, infant refuse to breastfeed and constipation.

23

24 **Breastfeeding practices during the experience of breastfeeding problems**

25 Even though most mothers have experienced breastfeeding problems,
26 breastfeeding practiced was still continued. The only little proportion of mothers
27 practiced mixed feeding, stopped breastfeeding temporarily and or substituted
28 with formula milk/other foods, as described in the **table 3**. Even though most
29 mothers still breastfeed when they experienced breastfeeding problems in each
30 period of age, only 22.9% mothers sustained breastfeeding practices within six
31 months.

32

1 **The coping mechanism of breastfeeding problems**

2 There are several responses of the mother when they experienced
3 breastfeeding problems, i.e., Looked for assisted, self treatment or did not do
4 anything, but most mothers looked for assistance (**Table 4**).

6 **The person who provided support and type of support**

7 There are many potential resources who could help mothers cope her
8 problems, whether family related or not. **Table 5** showed that health staff and
9 parent/parent-in-law were mostly mentioned as the party who providing help to
10 mothers when they experienced breastfeeding problems, whether when infant
11 aged 0-1 month, 1-3 months or 3-6 months.

12 Type of support provided by health staff and parent/parent-in-law mostly
13 related to advices when infant aged 0-1 month and helped treat the problems when
14 infant aged 1-3 months and 3-6 months (**Table 5**).

16 **Lactation Counselor**

17 Each Puskesmas in Maros have at least two lactation counselors, however,
18 job description of the lactation counselor was still unclear. Lactation counselors
19 admitted never introduced themselves as a lactation counselor. They went to the
20 community only as an ordinary health staff.

21 *“I never claimed as a lactation counselor, however, I usually said*
22 *to the mothers, called me please if you have any problems”*
23 *(Nutritionist with 9-years experience)*

24 *“Never, I am never introducing myself as a lactation counselor,*
25 *because we do not have the self confidence to claim as a lactation*
26 *counselor” (Nutritionist with 25-years experience)*

27 Lactation counselors have joined five days lactation counseling training,
28 conducted by Department of Health South Sulawesi Provinces. The training
29 materials consisted of exclusive breastfeeding, the benefit of breastfeeding, and
30 several problems during a breastfeed.

1 *“There are many topics in lactation counselor training, exclusive*
2 *breastfeeding, breastfeeding positions, sore nipple, low milk*
3 *supply, and etc”* (Nutritionist with 9-years experience)

4
5 *“Breastfeeding technique, sore nipple, There are so many topics,*
6 *all the questions have the education materials”* (Nutritionist with
7 25-years experience)

8
9 *“Breastfeeding technique, breastfeeding simulation, breast*
10 *engorgement, and etc.”* (Midwife with 14-years experience)

11 The breastfeeding problem was often asked by mothers i.e., No milk
12 production, low milk production and sore nipple.

13 *“Usually no breastmilk have been produced, low milk supply,*
14 *sore nipple, like that”* (Nutritionist with 9-years experience)

15 *“Usually only low milk supply, sore nipple, and etc.”*
16 (Nutritionist with 25-years experience)

17 *“Usually why my breast milk was low, the mother feels their*
18 *breast milk was rancid”* (midwife with 13-years experience)

19 There is no reporting mechanism regarding activities of lactation
20 counselors, mostly her activities were done on a voluntary basis.

21 *“There is no report system, only exclusive breastfeeding from*
22 *Posyandu”* (Nutritionist with 9-years experience)

23
24 *“There is no report for counselor activities, only regular report of*
25 *exclusive breastfeeding from Posyandu”* (Nutritionist with 25-
26 years experience)

27
28 *“No sir, the only report of growth monitoring and exclusive*
29 *breastfeeding from Posyandu”* (midwife with 13-years
30 experience)

31

1 **Observation result of IEC materials**

2 There are three types of IEC materials available at four Posyandu and two
3 Puskesmas being observed, i.e., Posters, leaflets and breastfeeding module. The
4 messages in the *IEC* materials consist of exclusive breastfeeding, early initiation
5 of breastfeeding and the benefit of exclusive breastfeeding. Even though there is a
6 lack of information regarding breastfeeding problems, however, breastfeeding
7 module have some information about how to prevent recurrence of breastfeeding
8 problems. This following table summarized the content of breastfeeding messages
9 observed in the IEC materials (**Table 6**).

10

11 **DISCUSSION**

12 **Type of breastfeeding problems, time of problem occurred and breastfeeding** 13 **practices**

14 Mothers were living in developing countries or developing countries have
15 a same pattern in term of type of breastfeeding problems and breastfeeding
16 practices when mothers experienced breastfeeding problems.

17 The present study showed that most mothers experienced breastfeeding
18 problem at the first month after delivery and the proportion was slowly decreased
19 to 3-6 months period. This result in line with a study by Malikaerjuna et. Al (2002),
20 showed that 31.7% mother experienced breastfeeding problems in the first month
21 after delivery and decreasing to 25.6% in the sixth month after delivery.

22 The first month after delivery is adaptation phase between mothers and
23 infant. In this period, some mothers try to learn how to breastfeed properly.
24 Therefore many breastfeeding problems arisen in this period.

25 If mothers cannot manage her breastfeeding problems as well as lack of
26 support from health worker or her environment, they are likely giving other food
27 to their infants. Therefore, the existence of support in this period is needed, at
28 least can help and motivated mothers to still breastfeeding as well as to minimize
29 the breastfeeding barriers.

30 The top five of breastfeeding problems experienced by mothers in the
31 present study mostly relate to a physical - technical aspect rather than
32 psychological aspect. This result in line with a study by Lamotagne et al. (2008)

1 in Quebec-Canada, showed that the three most frequent breastfeeding problems
2 experienced by the mother were sore nipple/breast, latching difficulties and low
3 milk supply. On the other hand, a study by Februhartanty et al. (2006) in Jakarta
4 showed that the top four breastfeeding problems, mostly related to psychological
5 aspect such as feeling emotionally upset, feeling tired and fatigued and perceived
6 milk insufficiency.

7 The previous studies limitedly explained regarding the pattern of
8 breastfeeding problems in term of the occurrence, source and the potential support
9 of problems²⁻⁷. However, the present study has identified patterns of breastfeeding
10 problems experienced by mothers. For instance, based on the occurrence, there are
11 five breastfeeding problems persisted in the 0-6 period, two problems only
12 occurred in the first month period and three problems occurred after the first
13 month. Based on source of problems, there are four breastfeeding problems
14 related to the mothers and infants side respectively, and based on potential support
15 consist of medical and non medical support.

16 The breastfeeding problems related to physical-technical aspect such as
17 sore nipple, normally occurs around first 30 to 60 seconds during
18 breastfeeding^{15,6}, breast engorgement and no milk production were normally
19 occurring around the 3rd to 4th day after delivery⁶. Those problems usually
20 associated with one of the several factors such as late initiation of breastfeeding,
21 infrequent breastfeeding, restriction on the duration and frequency of
22 breastfeeding, and poor infant sucking⁶. Therefore, assistance from health worker
23 or lactation counselor is needed to minimize the problems.

24 Several breastfeeding problems such as tired and fatigued mothers,
25 perception of insufficient breast milk and mother was busy, most of them
26 occurring in the period 1-3 months and 3-6 months. Those problems actually
27 interrelated each others. For instance, during the two or three months after
28 delivery, usually the mothers were slowly begun involved in household chores
29 and this situation will be affected to the physical and the psychological condition
30 of the mother. Unbalanced of physical and psychological condition usually
31 indicated by emerging of feeling tired and fatigued would be influencing the
32 breast milk production.

1 All breastfeeding problems were not managed properly tended to
2 negatively associated with breastfeeding practice. Previous studies showed that
3 mothers who have at least one breastfeeding difficulty were more likely not
4 succeeded exclusive breastfeeding and have a shorter duration of breastfeeding²⁻⁸,
5 as well as the present study showed that only 22.9% of mothers sustained
6 breastfeeding when they experienced breastfeeding problems within the first six
7 months and only 16.6% mothers practiced exclusive breastfeeding until six
8 months.

9 The high proportion of undernourished among infant in the present study,
10 might be due to breastfeeding problems were not well managed, and finally affect
11 to the nutrient intake of an infant during the first six month period after delivery,
12 and in the long term effect to the nutritional status of infant.

13 According to the explanation above, all breastfeeding mothers have the
14 same opportunity to suffer breastfeeding problems, whether in developed
15 countries or developing countries, distinguish might be only in the support system
16 when mother experienced breastfeeding problems.

17 Developed countries have the better support system rather than developing
18 countries because of higher government commitment to promote exclusive
19 breastfeeding as well as the education level of communities.

20

21 **The coping mechanism and support**

22 Mothers tended to look for assistance as a coping mechanism when they
23 experienced breastfeeding problems, whether in the period 0-1 month, 1-3 months
24 and 3-6 months. This confirmed that mothers have awareness to solve her
25 problems.

26 Health staff and mother/mother-in-law are identified as the people who
27 supported mothers when they experienced breastfeeding problems. Type of
28 supports range from only provide advice up to provide help to treat the problem.
29 This result in line with studies in West-Berlin, Germany and Quebec-Canada
30 showed that most mothers helped by midwives, family and friends when they
31 experienced breastfeeding problems^{2,3}.

1 Even though the education level and socio-economic status of mothers is
2 different, however, the potential support in developed countries or developing
3 countries more or less are the same sources i.e. From health staff and family
4 members.

5 Based on the potential support, breastfeeding problems could be divided
6 into two groups i.e., Medical (midwives, nutritionist and lactation counselor)
7 support and non-medical (mother/mother-in-law and husband) support.

8 Type of breastfeeding problems persisted in the 0-6 month period which
9 needed medical support are sore nipple, breast engorgement and the infant refusal
10 to breastfeed as well as the condition when the baby is sick, no milk production
11 (typically occurred in 0-1 month), as well as low milk supply and constipation
12 (typically for 1-6 months). Whereas the breastfeeding problems were related to
13 psychological aspect or non-medical support i.e. Tired and fatigued mothers,
14 sleepy baby and busy mothers.

15 The present study showed that in the study area health worker and
16 lactation counselors are potential supporters, because each village has a village
17 midwife and each Puskesmas has at least two lactation counselors. However, only
18 two health worker has participated on lactation counselor training, and
19 unfortunately most of lactation counselors did not carry out their duties properly,
20 due to reasons low confidence to claim as lactation counselors, lack of report
21 system for lactation counselor activities.

22 The previous study showed that each NICE project area in South
23 Sulawesi, included Maros District has around 30 lactation counselors, and most of
24 them are coordinators of midwives and a few of them were nutritionist. The
25 activity of lactation counselor only mass campaign¹⁴.

26 Health workers and lactation counselors were not done what they should
27 be done, due to the role of lactation counselors still unclear, as well as the quality
28 of lactation counselors training is still questionable, because the training of
29 lactation counselor about 2 years ago is not yet adopted the competence of
30 lactation counselor, therefore, Sentra Laktasi Indonesia (SELASI) at 2011 has
31 published a 40 hours module of lactation counselor training included competence
32 for lactation counselor.

1 However, health workers were required have an accurate understanding
2 about breastfeeding, as well as good practical skill, because most of mothers need
3 support to understand practical skills to breastfeed especially in several days after
4 delivery^{16,17}.

5 According to a review from UNICEF explained that health worker in
6 Indonesia that commonly ignorant toward the consequences of early introduction
7 of the formula milk, due to less of knowledge regarding how to manage such
8 breastfeeding problem and might be due to the aggressive marketing of breast
9 milk substitute¹⁸.

10 Some strategic programs are needed furthermore to empower the lactation
11 counselors, such as reinforce their skills and knowledge by training, regular
12 evaluation of lactation counselor activitie, increase their skills especially in
13 providing counseling and to give correct breastfeeding information to the pregnant
14 and breastfeeding mothers as well as the surrounding of mothers¹⁸

15 However, not all breastfeeding problems have to be burden of the health
16 workers or lactation counselors, because some breastfeeding problems can be
17 managed by family members especially by mothers and husbands, those problems
18 such as tired and fatigued mothers, sleepy baby and busy mothers could be
19 managed by family member.

20 The present study showed that mother/mother-in-law is the most people
21 who supported mothers and the second is husbands. This finding in line with
22 study held by Priscilla (2008) in West Sumatra that grandmothers have an
23 important role in the decision breastfeeding practice. That means mothers from
24 *Padang* ethnic and *Bugis-Makassar* ethnic at least have a same pattern in term of
25 potential support from family members i.e. mother/mother-in-law.

26 On the other hand, one of *Bugis-Makassar* culture is mother/mother-in-law
27 usually accompany mother during delivery process until around one month after
28 delivery. During those period, mother/mother-in-law usually helping household
29 chores as well as provide assistance to take care of baby.

30 In general, most of mothers in Maros District were living in the extended
31 families. Eventhough the mothers were living in the nuclear family, however,

1 mpthers usually build a house not far from their house parents/parents-in-law, stiiil
2 in the one village as well as one sub district.

3 This calls for the department of maternal and child health to give more attention to
4 mother/mother-in-law and husband as one of the alternative targets of
5 breastfeeding program, especially in terms of keeping a good situation at home,
6 reducing the stress factor of mothers, sharing the work, and help taking care infant
7

8 **IEC breastfeeding materials**

9 IEC materials are one of the main components of breastfeeding promotion,
10 however, the amount is limited, and the content does not describe tips for mothers
11 when breastfeeding problems occurred. The present study found that IEC
12 materials such as poster and leaflet were limited. Leaflet for instance, only
13 function as an aid during mass education (*penyuluhan*), not intended as take home
14 materials.

15 The content of breastfeeding messages based on IEC materials were
16 observed i.e. Exclusive breastfeeding practice, early initiation of breastfeeding
17 and the benefit of exclusive breastfeeding, and less explanation about
18 breastfeeding problems. Although all of the Puskesmas have Breastfeeding
19 education module, the module were not available in all of the Puskesmas.

20 The Government regulation of South Sulawesi Province, Number 6 in
21 2010 regarding exclusive breastfeeding, did not clearly state breastfeeding
22 problems. The regulation stated that the material of counseling consists of early
23 initiation of breastfeeding, benefit of colostrum and exclusive breastfeeding¹³.
24 Might be this is the reasons why the content of IEC breastfeeding materials lack
25 of information regarding breastfeeding problems.

26 However, in general, the Government regulation of South Sulawesi
27 Province has stated about what to do as well as punishment for those who violate,
28 however, the regulation has not been socialized evenly.

29 Furthermore, a strategy is needed to socialize the regulation evenly, increase
30 quality of IEC materials in terms of content and availability. The topic of
31 breastfeeding problems should be given through *Penyuluhan* and counseling with
32 the same proportion with other breastfeeding topics such as the benefits of

1 breastfeeding, initiation of early breastfeeding, etc., with the expectation, mothers
2 could receive the comprehensive information regarding breastfeeding practices.

3

4 **CONCLUSION**

5 Breastfeeding problems were very commonly experienced by the mother
6 during the first six months after delivery and tended to decrease the rate of
7 exclusive breastfeeding practice. Furthermore, there are needs to empower of
8 lactation counselor and enrich of IEC breastfeeding materials with breastfeeding
9 problems issues

10

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15 M, J.F and D.N.B designed research; M, conducted research; M, J.F and D.N.B
16 analyzed data; M, wrote the paper and had primary responsibility for final content.

17 All authors read and approved the final manuscript

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19 *Conflict of interest:* There are no competing interests.

20

21

22

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1 **Table 1.** Characteristics of mothers and infant
2

Characteristic	Statistics
Parents (n=205)	
Age of mother (years) ¹	28 (18-47)
Education of mother (≥ 9 years) ²	117 (57.07)
Occupation of mother (working) ^{2,3}	34 (16.59)
Household size (persons) ¹	6 (3-9)
Number of underfive cared by the mother (≥ 2 person) ²	81 (39.51)
Parity (Multiparous) ²	142 (69.27)
Infant (n=205)	
Sex (male) ²	112 (54.6)
Age of infant (months) ¹	9 (6-12)

3 ¹median (min-max); ²n(%); ³Civil servant, private employee, shop seller, farmer, laborer; ³Civil
4 servant, private employee, shop seller, driver, tukang becak, farmer, laborer
5

6 **Table 2.** The type of breastfeeding problem experienced by mothers during the
7 first six months
8

Type of breastfeeding problems ¹	At the period of ²		
	0-1 month (n=197)	1-3 months (n=166)	3-6 months (n=163)
Sore nipple ^{a,*}	113 (57.4)	21 (12.7)	15 (9.2)
No milk production ^{a,*}	103 (52.3)	-	-
Tired and fatigued mother ^{b,*}	62 (31.5)	59 (35.5)	54 (33.1)
Breast engorgement ^{a,*}	55 (27.9)	20 (12.0)	7 (4.3)
Sleepy baby ^{a,**}	50 (25.4)	-	-
Sick baby ^{a,**}	23 (11.7)	77 (46.4)	109 (66.9)
Low milk supply ^{b,*}	-	53 (31.9)	51 (31.3)
Mother was busy ^{a,*}	-	25 (15.1)	22 (13.5)
Infant refusal to breastfeed ^{a,*}	27 (13.7)	24 (14.5)	17 (10.4)
Constipation ^{a,**}	-	20 (12.0)	19 (11.7)

9 ¹Multiple response; ²n(%); ³Related to physical-technical aspect; ⁴Related to psychological aspect
10 *Mother centered; **Infant centered
11

12 **Table 3.** Breastfeeding practices when mother experienced with breastfeeding
13 problems during the first six months
14

Breastfeeding practice ¹	At the period of ²		
	0-1 month (n=197)	1-3 months (n=166)	3-6 months (n=163)
Continued breastfeeding	148 (75.1)	111 (66.9)	99 (60.7)
Mix feeding	48 (24.4)	45 (27.1)	65 (39.9)
Stopped breastfeeding temporary	76 (38.6)	7 (4.2)	4 (2.5)
Substituted with formula milk/other foods	12 (6.1)	20 (12.0)	24 (14.7)

15 ¹Multiple response; ²n(%)
16

1 **Table 4.** The coping mechanism of breastfeeding problem experienced by
 2 mothers during the first six months
 3

Coping mechanism ¹	At the period of ²		
	0-1 month (n=197)	1-3 month (n=166)	1-3 month (n=163)
Look for assistance	167 (84.8)	142 (85.5)	144 (88.3)
Self treatment	102 (51.8)	76 (45.8)	57 (35.0)
Did not do anything	47 (23.9)	5 (3.0)	32 (19.6)

4 ¹Multiple response; ²n(%)
 5

6 **Table 5.** People who provided support and type of supported during the first six
 7 months
 8

Person and type of support ¹	At the period of ²		
	0-1 month (n=167)	1-3 months (n=142)	3-6 months (n=144)
Person who provided support			
Husband	22 (13.2)	11 (7.7)	10 (6.9)
Parent/parent-in-law	69 (41.3)	55 (38.7)	54 (37.5)
Sister/aunt/daughter or son	17 (10.2)	20 (14.1)	15 (10.4)
Neighbor/friend	8 (4.8)	2 (1.4)	2 (1.4)
Health staff	103 (61.7)	81 (57.0)	93 (64.6)
Traditional healer	4 (2.4)	3 (2.2)	2 (1.4)
Type of support			
Helped to take care the infant	66 (39.5)	68 (47.9)	57 (39.6)
Provided advice	124 (74.3)	55 (38.7)	47 (32.6)
Helped to treat	52 (31.1)	79 (55.6)	96 (66.7)

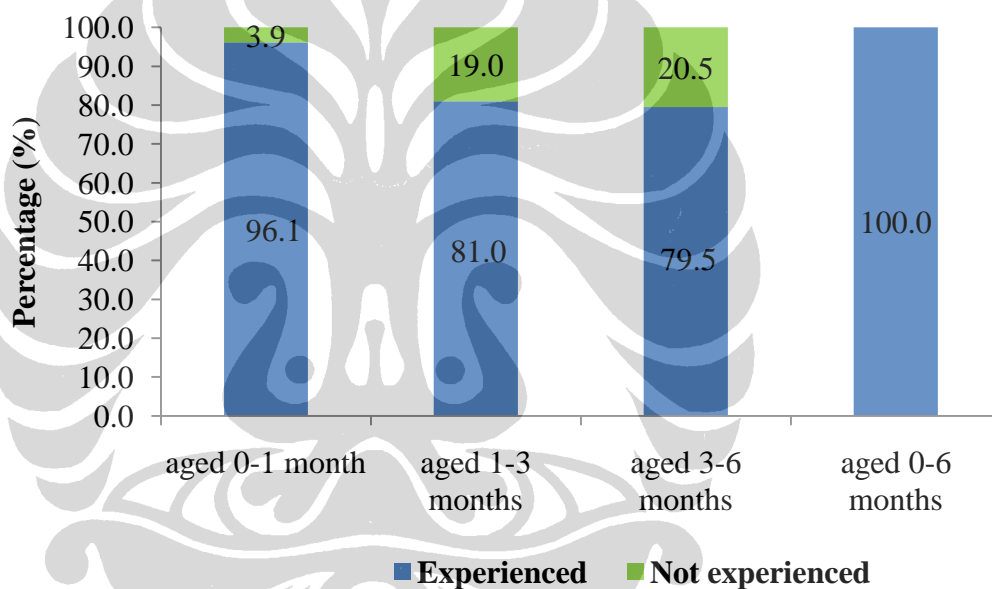
9 ¹Multiple response; ²n(%)
 10
 11

1 **Table 6.** Content of breastfeeding messages in the observed IEC materials
2

Type of material	Content of material	Produced	Location
Poster	<ul style="list-style-type: none"> • Exclusive breastfeeding • Early breastfeeding initiation • The benefit of exclusive breastfeeding 	<ul style="list-style-type: none"> • Ministry of Health and NICE Project • Department of health South Sulawesi Province and NICE Project • Department of Health South Sulawesi Province 	Posyandu
Leaflet	<ul style="list-style-type: none"> • Exclusive breastfeeding • Early initiation breastfeeding • Definition and benefit of early breastfeeding initiation • The stage of early breastfeeding initiation • The benefit of skin-to-skin contact between mother and infants 	<ul style="list-style-type: none"> • Nestle • Department of Health South Sulawesi Province and NICE Project 	Puskesmas 50 sheet each Puskesmas, however not all puskesmas have this leaflet
	<ul style="list-style-type: none"> • Exclusive breastfeeding and problems • Definition of exclusive breastfeeding • Definition of colostrums • Benefit of colostrums • Benefit of breastfeeding • Duration of breastfeeding • How to increase milk production • Factors contributing to successful breastfeeding • How to breastfeeding correctly 	<ul style="list-style-type: none"> • Department of Health South Sulawesi Province and NICE Project 	50 sheet each Puskesmas, however not all Puskesmas have this leaflet
Breastfeeding module	<p>Consist of 25 modules as follow:</p> <ul style="list-style-type: none"> • What and how to early initiation breastfeeding • The stage of early breastfeeding initiation • The myth and fact of early breastfeeding initiation • The immune system of newborns baby • The true story from Pakistan • The myth and fact of breastfeeding • The reasons exclusive breastfeeding is important • The child rights • Introduction of breast • How breast milk is produced • How to read growth chart • Increasing body weight • Eating because of hunger 	<ul style="list-style-type: none"> • USAID Indonesia and Ministry of Health 	One package, however not all puskesmas have this module. The module is addressed for health professional

Type of material	Content of material	Produced	Location
	<ul style="list-style-type: none"> • The type and benefit of breast milk • The stage of breastfeeding • How to make baby breastfeed easily • Proper latching • Communicating with baby • Low milk production • Expressing breast milk with hand • The stage of breast milk pumping • Breastfeeding and working 		

1
2



3
4
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Figure 1: Percentage of breastfeeding problems experienced by mother at 0-1 month, 1-3 months and 3-6 months period

Directions to Contributors

Public Health Nutrition

(Revised January 2012)

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1. Setchell KD, Faughnan MS, Avades T *et al.* (2003) Comparing the pharmacokinetics of daidzein and genistein with the use of 13C-labeled tracers in premenopausal women. *Am J Clin Nutr* **77**, 411–419.
2. Barker DJ, Winter PD, Osmond C *et al.* (1989) Weight in infancy and death from ischaemic heart disease. *Lancet* **ii**, 577–580.
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4. Bradbury J, Thomason JM, Jepson NJA *et al.* (2003) A nutrition education intervention to increase the fruit and vegetable intake of denture wearers. *Proc Nutr Soc* **62**, 86A.

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8. Hall WL, Vafeiadou K, Hallund J *et al.* (2005) Soy isoflavone enriched foods and inflammatory biomarkers of cardiovascular risk in postmenopausal women: interactions with genotype and equol production. *Am J Clin Nutr* (In the Press).
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10. Skurk T, Herder C, Kraft I *et al.* (2005) Production and release of macrophage migration inhibitory factor from human adipocytes. *Endocrinology* **146**, 1006–1011; Epublication 2 December 2004.
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15. Henderson L, Gregory J, Irving K *et al.* (2004) *National Diet and Nutrition Survey: Adults Aged 19 to 64 Years*. vol. 2: *Energy, Protein, Fat and Carbohydrate Intake*. London: The Stationery Office.
16. International Agency for Research on Cancer (2004) *Cruciferous Vegetables, Isothiocyanates and Indoles*. *IARC Handbooks of Cancer Prevention* no. 9 [H Vainio and F Bianchini, editors]. Lyon, France: IARC Press.
17. Linder MC (1996) Copper. In *Present Knowledge in Nutrition*, 7th ed., pp. 307–319 [EE Zeigler and LJ Filer Jr, editors]. Washington, DC: ILSI Press.
18. World Health Organization (2003) *Diet, Nutrition and the Prevention of Chronic Diseases*. *Joint WHO/FAO Expert Consultation*. *WHO Technical Report Series* no. 916. Geneva: WHO.
19. Keiding L (1997) *Astma, Allergi og Anden Overfølsomhed i Danmark – Og Udviklingen 1987–1991 (Asthma, Allergy and Other Hypersensitivities in Denmark, 1987–1991)*. Copenhagen, Denmark: Dansk Institut for Klinisk Epidemiologi.

References to material available on websites should include the full Internet address, and the date of the version cited. Thus:

20. Department of Health (1997) Committee on Toxicity of Chemicals in Food Consumer Products and the Environment. Statement on vitamin B₆ (pyridoxine) toxicity. <http://www.open.gov.uk/doh/hef/B6.htm>
21. Kramer MS & Kakuma R (2002) *The Optimal Duration of Exclusive Breastfeeding: A Systematic Review*. Rome: WHO; available at http://www.who.int/nut/documents/optimal_duration_of_exc_bfeeding_review_eng.pdf
22. Hooper L, Thompson RL, Harrison RA *et al.* (2004) Omega 3 fatty acids for prevention and treatment of cardiovascular disease. *Cochrane Database of Systematic Reviews*, issue 4, CD003177. <http://www.mrw.interscience.wiley.com/cochrane/clsysrev/articles/CD003177/frame.html>
23. Nationmaster (2005) HIV AIDS – Adult prevalence rate. http://www.nationmaster.com/graph-T/hea_hiv_aid_adu_pre_rat (accessed June 2005).

(j) *Supplementary data*: Additional data (e.g. data files, large tables) relevant to the paper can be submitted for publication online only, where they are made available via a link from the abstract and the paper. The paper should stand alone without these data. Supplementary data should be supplied as a PDF for the review process and must be cited in a relevant place in the text of the paper.

Mathematical modelling of nutritional processes. Papers in which mathematical modelling of nutritional processes forms the principal element will be considered for publication provided: (a) they are based on sound biological and mathematical principles; (b) they advance nutritional concepts or identify new avenues likely to lead to such advances; (c) assumptions used in their construction are fully described and supported by appropriate argument; (d) they are described in such a way that the nutritional purpose is clearly apparent; (e) the contribution of the model to the design of future experimentation is clearly defined.

Units. Results should be presented in metric units according to the International System of Units (see *Quantities, Units and Symbols in Physical Chemistry*, 3rd ed. (2007) Cambridge: RSC Publishing), and *Metric Units, Conversion Factors and Nomenclature in Nutritional and Food Sciences* (1972) London: The Royal Society – as reproduced in *Proceedings of the Nutrition Society* (1972) **31**, 239–247). SI units should be used throughout the paper. The author will be asked to convert any values that are given in any other form. The only exception is where there is a unique way of expressing a particular variable that is in widespread use. Energy values must be given in Joules (MJ or kJ) using the conversion factor 1 kcal = 4.184 kJ. If required by the author, the value in kcal can be given afterwards in parentheses. Temperature is given in degrees Celsius (°C). Vitamins should be given as mg or µg, not as IU.

For substances of known molecular mass (Da) or relative molecular mass, e.g. glucose, urea, Ca, Na, Fe, K, P, values should be expressed as mol/l; for substances of indeterminate molecular mass (Da) or relative molecular mass, e.g. phospholipids, proteins, and for trace elements, e.g. Cu, Zn, then g/l should be used.

Time. The 24 h clock should be used, e.g. 15.00 hours.

Units are: year, month, week, d, h, min, s, kg, g, mg, µg, litre, ml, µl, fl. To avoid misunderstandings, the word litre should be used in full, except in terms like g/l. Radioactivity should be given in becquerels (Bq or GBq) not in Ci. 1 MBq = 27.03 µCi (1Bq = 1 disintegration/s).

Statistical treatment of results. Data from individual replicates should not be given for large experiments, but may be given for small studies. The methods of statistical analysis used should be described, and references to statistical analysis packages included in the text, thus: Statistical Analysis Systems statistical software package version 6.11 (SAS Institute, Cary, NC, USA). Information such as analysis of variance tables should be given in the paper only if they are relevant to the discussion. A statement of the number of replicates, their average value and some appropriate measure of variability is usually sufficient.

Comparisons between means can be made by using either confidence intervals (CI) or significance tests. The most appropriate of such measures is usually the standard error of a difference between means (SED), or the standard errors of the means (SE or SEM) when these vary between means. The standard deviation (SD) is more useful only when there is specific interest in the variability of individual values. The degrees of freedom (df) associated with SED, SEM or SD should also be stated. The number of decimal places quoted should be sufficient but not excessive. Note that pH is an exponential number, as are the log(10) values often quoted for microbial numbers. Statistics should be carried out on the scalar rather than the exponential values.

If comparisons between means are made using CI, the format for presentation is, e.g. 'difference between means 0.73 (95 % CI 0.314, 1.36) g'. If significance tests are used, a statement that the difference between the means for two groups of values is (or is not) statistically significant should include the level of significance attained, preferably as an explicit *P* value (e.g. *P*=0.016 or *P*=0.32) rather than as a range (e.g. *P*<0.05 or *P*>0.05). It should be stated whether the significance levels quoted are one-sided or two-sided. Where a multiple comparison procedure is used, a description or explicit reference should be given. Where appropriate, a superscript notation may be used in tables to denote levels of significance; similar superscripts should denote lack of a significant difference.

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In curves presenting experimental results the determined points should be clearly shown, the symbols used being, in order of preference, ○, ●, Δ, ▲, □, ■, ×, +, ⊖. Curves and symbols should not extend beyond the experimental points. Scale-marks on the axes should be on the inner side of each axis and should extend beyond the last experimental point. Ensure that lines and symbols used in graphs and shading used in histograms are large enough to be easily identified when the figure is reduced to fit the printed page.

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Footnotes are given in the following order: (1) abbreviations, (2) superscript letters, (3) symbols. Abbreviations are given in the format: RS, resistant starch. Abbreviations appear in the footnote in the order that they appear in the table (reading from left to right across the table, then down each column). Abbreviations in tables must be defined in footnotes. Symbols for footnotes should be used in the sequence: *†‡§||¶, then ** etc. (omit * or †, or both, from the sequence if they are used to indicate levels of significance).

For indicating statistical significance, superscript letters or symbols may be used. Superscript letters are useful where comparisons are within a row or column and the level of significance is uniform, e.g. ^{a,b,c}Mean values within a column with unlike superscript letters were significantly different (*P*<0.05). Symbols are useful for indicating significant differences between rows or columns, especially where different levels of significance are found, e.g. 'Mean values were significantly different from those of the control group: **P*<0.05, ***P*<0.01, ****P*<0.001'. The symbols used for *P* values in the tables must be consistent.

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Chemical formulas. These should be written as far as possible on a single horizontal line. With inorganic substances, formulas may be used from first mention. With salts, it must be stated whether or not the anhydrous material is used, e.g. anhydrous CuSO_4 , or which of the different crystalline forms is meant, e.g. $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$, $\text{CuSO}_4 \cdot \text{H}_2\text{O}$.

Descriptions of solutions, compositions and concentrations. Solutions of common acids, bases and salts should be defined in terms of molarity (M), e.g. 0.1 M- NaH_2PO_4 . Compositions expressed as mass per unit mass (w/w) should have values expressed as ng, μg , mg or g per kg; similarly for concentrations expressed as mass per unit volume (w/v), the denominator being the litre. If concentrations or compositions are expressed as a percentage, the basis for the composition should be specified (e.g. % (w/w) or % (w/v) etc.). The common measurements used in nutritional studies, e.g. digestibility, biological value and net protein utilization, should be expressed as decimals rather than as percentages, so that amounts of available nutrients can be obtained from analytical results by direct multiplication. See *Metric Units, Conversion Factors and Nomenclature in Nutritional and Food Sciences*. London: The Royal Society, 1972 (para. 8).

Gene nomenclature and symbols. The use of symbols and nomenclature recommended by the HUGO Gene Nomenclature Committee (<http://www.genenames.org/>) is encouraged. Information on human genes is also available from Entrez Gene (<http://www.ncbi.nlm.nih.gov/sites/entrez?db=gene>).

Nomenclature of vitamins. Most of the names for vitamins and related compounds that are accepted by the Editors are those recommended by the IUNS Committee on Nomenclature. See *Nutrition Abstracts and Reviews* (1978) **48A**, 831–835.

Acceptable name	Other names*
Vitamin A	
Retinol	Vitamin A ₁
Retinaldehyde, retinal	Retinene
Retinoic acid (all- <i>trans</i> or 13- <i>cis</i>)	Vitamin A ₁ acid
3-Dehydroretinol	Vitamin A ₂
Vitamin D	
Ergocalciferol, ercalciol	Vitamin D ₂ calciferol
Cholecalciferol, calciol	Vitamin D ₃
Vitamin E	
α -, β - and γ -tocopherols plus tocotrienols	
Vitamin K	
Phylloquinone	Vitamin K ₁
Menaquinone-n (MK-n) [†]	Vitamin K ₂
Menadione	Vitamin K ₃ , menaquinone, menaphthone
Vitamin B₁	
Thiamin	Aneurin(e), thiamine
Vitamin B₂	
Riboflavin	Vitamin G, riboflavine, lactoflavin
Niacin	
Nicotinamide	Vitamin PP
Nicotinic acid	
Folic Acid	
Pteroyl(mono)glutamic acid	Folacin, vitamin B _c or M
Vitamin B₆	
Pyridoxine	Pyridoxol
Pyridoxal	
Pyridoxamine	
Vitamin B₁₂	
Cyanocobalamin	
Hydroxocobalamin	Vitamin B _{12a} or B _{12b}
Aquocobalamin	
Methylcobalamin	
Adenosylcobalamin	
Inositol	
Myo-inositol	Meso-inositol
Choline	
Pantothenic acid	
Biotin	Vitamin H
Vitamin C	
Ascorbic acid	

Dehydroascorbic acid

*Including some names that are still in use elsewhere, but are not used by *Public Health Nutrition*.

†Details of the nomenclature for these and other naturally-occurring quinones should follow the Tentative Rules of the IUPAC-IUB Commission on Biochemical Nomenclature (see *European Journal of Biochemistry* (1975) **53**, 15–18).

Generic descriptors. The terms **vitamin A**, **vitamin C** and **vitamin D** may still be used where appropriate, for example in phrases such as 'vitamin A deficiency', 'vitamin D activity'.

Vitamin E. The term **vitamin E** should be used as the descriptor for all tocol and tocotrienol derivatives exhibiting qualitatively the biological activity of α -tocopherol. The term **tocopherols** should be used as the generic descriptor for all methyl tocols. Thus, the term **tocopherol** is not synonymous with the term **vitamin E**.

Vitamin K. The term **vitamin K** should be used as the generic descriptor for 2-methyl-1,4-naphthoquinone (menaphthone) and all derivatives exhibiting qualitatively the biological activity of phyloquinone (phytylmenaquinone).

Niacin. The term **niacin** should be used as the generic descriptor for pyridine 3-carboxylic acid and derivatives exhibiting qualitatively the biological activity of nicotinamide.

Vitamin B₆. The term **vitamin B₆** should be used as the generic descriptor for all 2-methylpyridine derivatives exhibiting qualitatively the biological activity of pyridoxine.

Folate. Due to the wide range of C-substituted, unsubstituted, oxidized, reduced and mono- or polyglutamyl side-chain derivatives of pteroylmonoglutamic acid that exist in nature, it is not possible to provide a complete list. Authors are encouraged to use either the generic name or the correct scientific name(s) of the derivative(s), as appropriate for each circumstance.

Vitamin B₁₂. The term **vitamin B₁₂** should be used as the generic descriptor for all corrinoids exhibiting qualitatively the biological activity of cyanocobalamin. The term **corrinoids** should be used as the generic descriptor for all compounds containing the corrin nucleus and thus chemically related to cyanocobalamin. The term **corrinoid** is not synonymous with the term **vitamin B₁₂**.

Vitamin C. The terms **ascorbic acid** and **dehydroascorbic acid** will normally be taken as referring to the naturally-occurring L-forms. If the subject matter includes other optical isomers, authors are encouraged to include the L- or D- prefixes, as appropriate. The same is true for all those vitamins which can exist in both natural and alternative isomeric forms.

Amounts of vitamins and summation. Weight units are acceptable for the amounts of vitamins in foods and diets. For concentrations in biological tissues, SI units should be used; however, the authors may, if they wish, also include other units, such as weights or international units, in parentheses.

See *Metric Units, Conversion Factors and Nomenclature in Nutritional and Food Sciences* (1972) paras 8 and 14–20. London: The Royal Society.

Nomenclature of fatty acids and lipids. In the description of results obtained for the analysis of fatty acids by conventional GLC, the shorthand designation proposed by Farquhar JW, Insull W, Rosen P, Stoffel W & Ahrens EH (*Nutrition Reviews* (1959), **17**, Suppl.) for individual fatty acids should be used in the text, tables and figures. Thus, 18 : 1 should be used to represent a fatty acid with eighteen carbon atoms and one double bond; if the position and configuration of the double bond is unknown. The shorthand designation should also be used in the abstract. If the positions and configurations of the double bonds are known, and these are important to the discussion, then a fatty acid such as linoleic acid may be referred to as *cis*-9,*cis*-12-18 : 2 (positions of double bonds related to the carboxyl carbon atom 1). However, to illustrate the metabolic relationship between different unsaturated fatty acid families, it is sometimes more helpful to number the double bonds in relation to the terminal methyl carbon atom, *n*. The preferred nomenclature is then: 18 : 3*n*-3 and 18 : 3*n*-6 for α -linolenic and γ -linolenic acids respectively; 18 : 2*n*-6 and 20 : 4*n*-6 for linoleic and arachidonic acids respectively and 18 : 1*n*-9 for oleic acid. Positional isomers such as α - and γ -linolenic acid should always be clearly distinguished. It is assumed that the double bonds are methylene-interrupted and are of the *cis*-configuration (see Holman RT in *Progress in the Chemistry of Fats and Other Lipids* (1966) vol. 9, part 1, p. 3. Oxford: Pergamon Press). Groups of fatty acids that have a common chain length but vary in their double bond content or double bond position should be referred to, for example, as C₂₀ fatty acids or C₂₀ PUFA. The modern nomenclature for glycerol esters should be used, i.e. triacylglycerol, diacylglycerol, monoacylglycerol *not* triglyceride, diglyceride, monoglyceride. The form of fatty acids used in diets should be clearly stated, i.e. whether ethyl esters, natural or refined fats or oils. The composition of the fatty acids in the dietary fat and tissue fats should be stated clearly, expressed as mol/100 mol or g/100 g total fatty acids.

Nomenclature of micro-organisms. The correct name of the organism, conforming with international rules of nomenclature, should be used: if desired, synonyms may be added in parentheses when the name is first mentioned. Names of bacteria should conform to the current Bacteriological Code and the opinions issued by the International Committee on Systematic Bacteriology. Names of algae and fungi must conform to the current International Code of Botanical Nomenclature. Names of protozoa should conform to the current International Code of Zoological Nomenclature.

Nomenclature of plants. For plant species where a common name is used that may not be universally intelligible, the Latin name in italics should follow the first mention of the common name. The cultivar should be given where appropriate.

Other nomenclature, symbols and abbreviations. Authors should consult recent issues of *Public Health Nutrition* for guidance. The IUPAC rules on chemical nomenclature should be followed, and the recommendations of the Nomenclature Committee of IUBMB and the IUPAC-IUBMB Joint Commission on Biochemical Nomenclature and Nomenclature Commission of IUBMB in *Biochemical Nomenclature and Related Documents* (1992), 2nd ed., London: Portland Press (<http://www.chem.qmul.ac.uk/iupac/bibliog/white.html>). The symbols and abbreviations, other than units, are essentially those listed in *British Standard 5775* (1979–1982), *Specifications for Quantities, Units and Symbols*, parts 0–13. Day should be abbreviated to d, for example 7 d, except for 'each day', '7th day' and 'day 1'.

Elements and simple chemicals (e.g. Fe and CO₂) can be referred to by their chemical symbol (with the exception of arsenic and iodine, which should be written in full) or formula from the first mention in the text; the title, text and table headings, and figure legends can be taken as exceptions. Well-known abbreviations for chemical substances may be used without explanation, thus: RNA for ribonucleic acid and DNA for deoxyribonucleic acid. Other substances that are mentioned frequently (five or more times) may also be abbreviated, the abbreviation being placed in parentheses at the first mention, thus: lipoprotein lipase (LPL), after that, LPL, and an alphabetical list of abbreviations used should be included. Only accepted abbreviations may be used in the title and text headings. If an author's initials are mentioned in the text, they should be distinguished from other abbreviations by the use of stops, e.g. 'one of us (P. J. H.)...'. For UK counties the official names given in the *Concise Oxford Dictionary* (1995) should be used and for states of the USA two-letter abbreviations should be used, e.g. MA (not Mass.) and IL (not Ill.). Terms such as 'bioavailability' or 'available' may be used providing that the use of the term is adequately defined.

Spectrophotometric terms and symbols are those proposed in *IUPAC Manual of Symbols and Terminology for Physicochemical Quantities and Units* (1979) London: Butterworths. The attention of authors is particularly drawn to the following symbols: m (milli, 10³), μ (micro, 10⁶), n (nano, 10⁹) and p (pico, 10¹²). Note also that ml (millilitre) should be used instead of cc, μm (micrometre) instead of μ (micron) and μg (microgram) instead of γ.

Numbers. Numerals should be used with units, for example, 10 g, 7 d, 4 years (except when beginning a sentence, thus: 'Four years ago...'); otherwise, words (except when 100 or more), thus: one man, ten ewes, ninety-nine flasks, three times (but with decimal, 2.5 times), 100 patients, 120 cows, 136 samples.

Abbreviations. The following abbreviations are accepted without definition by the *British Journal of Nutrition*:

ADP (GDP)	adenosine (guanosine) 5'-disphosphate
AIDS	acquired immune deficiency syndrome
AMP (GMP)	adenosine (guanosine) 5'-monophosphate
ANCOVA	analysis of covariance
ANOVA	analysis of variance
apo	apolipoprotein
ATP (GTP)	adenosine (guanosine) 5'-triphosphate
AUC	area under the curve
BMI	body mass index
BMR	basal metabolic rate
bp	base pair
BSE	bovine spongiform encephalopathy
CHD	coronary heart disease
CI	confidence interval
CJD	Creutzfeldt-Jacob disease
CoA and acyl-CoA	co-enzyme A and its acyl derivatives
CV	coefficient of variation
CVD	cardiovascular disease
Df	degrees of freedom
DHA	docosahexaenoic acid
DM	dry matter
DNA	deoxyribonucleic acid
dpm	disintegrations per minute
EDTA	ethylenediaminetetra-acetic acid
ELISA	enzyme-linked immunosorbent assay
EPA	eicosapentaenoic acid
Expt	experiment (for specified experiment, e.g. Expt 1)
FAD	flavin-adenine dinucleotide
FAO	Food and Agriculture Organization (except when used as an author)
FFQ	food-frequency questionnaire
FMN	flavin mononucleotide
GC	gas chromatography
GLC	gas-liquid chromatography
GLUT	glucose transporter
GM	genetically modified
Hb	haemoglobin
HDL	high-density lipoprotein
HEPES	4-(2-hydroxyethyl)-1-piperazine-ethanesulfonic acid
HIV	human immunodeficiency virus
HPLC	high-performance liquid chromatography
Ig	immunoglobulin
IHD	ischaemic heart disease
IL	interleukin
IR	infra red
kb	kilobases
K _m	Michaelis constant

LDL	low-density lipoprotein
MHC	major histocompatibility complex
MRI	magnetic resonance imaging
MS	mass spectrometry
MUFA	monounsaturated fatty acids
NAD ⁺ , NADH	oxidized and reduced nicotinamide-adenine dinucleotide
NADP ⁺ , NADPH	oxidized and reduced nicotinamide-adenine dinucleotide phosphate
NEFA	non-esterified fatty acids
NF-κB	nuclear factor kappa B
NMR	nuclear magnetic resonance
NS	not significant
NSP	non-starch polysaccharide
OR	odds ratio
PAGE	polyacrylamide gel electrophoresis
PBS	phosphate-buffered saline
PCR	polymerase chain reaction
PG	prostaglandin
PPAR	peroxisome proliferator-activated receptor
PUFA	polyunsaturated fatty acids
RDA	recommended dietary allowance
RER	respiratory exchange ratio
RIA	radioimmunoassay
RMR	resting metabolic rate
RNA, mRNA etc.	ribonucleic acid, messenger RNA etc.
rpm	revolutions per minute
RT	reverse transcriptase
SCFA	short-chain fatty acids
SDS	sodium dodecyl sulphate
SED	standard error of the difference between means
SFA	saturated fatty acids
SNP	single nucleotide polymorphism
TAG	triacylglycerol
TCA	trichloroacetic acid
TLC	thin-layer chromatography
TNF	tumour necrosis factor
UN	United Nations (except when used as an author)
UNICEF	United Nations International Children's Emergency Fund
UV	ultra violet
VLDL	very-low-density lipoprotein
V _{O2}	O ₂ consumption
V _{O2max}	maximum O ₂ consumption
WHO	World Health Organization (except when used as an author)

Use of three-letter versions of amino acids in tables: Leu, His, etc.
CTP, UTP, GTP, ITP, as we already use ATP, AMP etc.

Disallowed words and phrases. The following are disallowed by *Public Health Nutrition*:
deuterium or tritium (use ²H and ³H)
c.a. or around (use approximately or about)
canola (use rapeseed)
ether (use diethyl ether)
free fatty acids (use NEFA)
isocaloric/calorie (use isoenergetic/energy)
quantitate (use quantify)
unpublished data or observations (use unpublished results)

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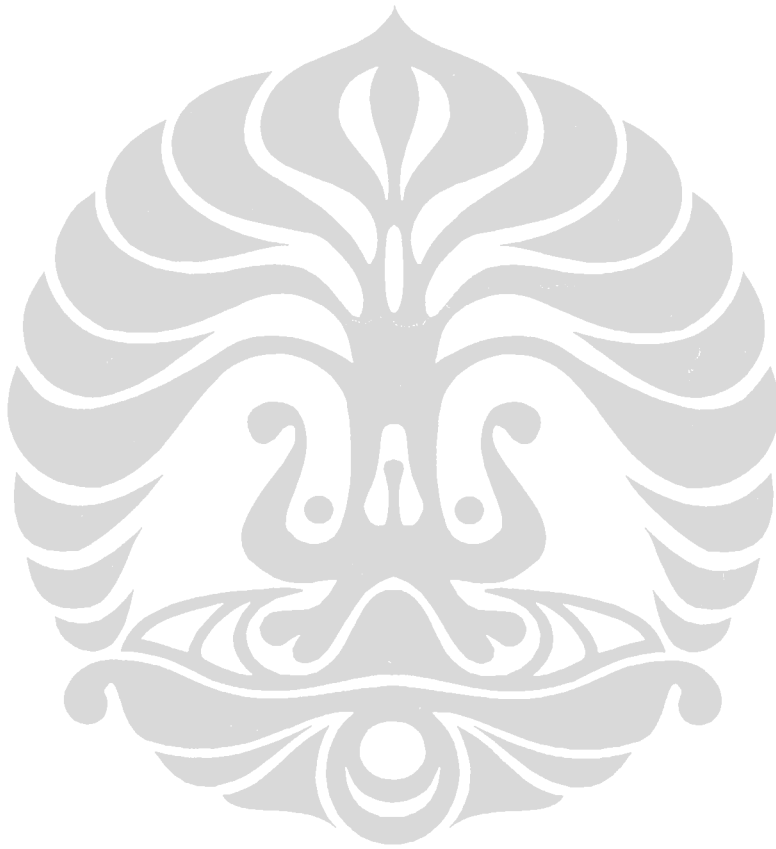
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Nomor : 14 /PT02.FK/ETIK/2012

KETERANGAN LOLOS KAJI ETIK

ETHICAL APPROVAL

Komite Etik Penelitian Kesehatan Fakultas Kedokteran Universitas Indonesia dalam upaya melindungi hak asasi dan kesejahteraan subyek penelitian kedokteran, telah mengkaji dengan teliti protokol berjudul:

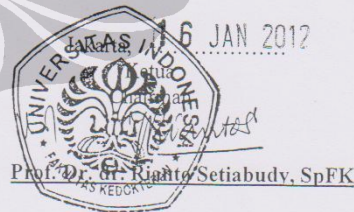
The Ethics Committee of the Faculty of Medicine, University of Indonesia, with regards of the Protection of human rights and welfare in medical research, has carefully reviewed the research protocol entitled:

“The Experience of Breastfeeding Problems During the First Six Months Period After Delivery Among Mother in Maros District, South Sulawesi Provinces (Pengalaman Dengan Masalah Menyusui Selama Periode Enam Bulan Pertama Setelah Melahirkan Pada Ibu di Kabupaten Maros, Propinsi Sulawesi Selatan)”.

Peneliti Utama : Manjilala, SGz
Principal Investigator

Nama Institusi : Seameo-Recfon UI
Name of the Institution

dan telah menyetujui protokol tersebut di atas.
And approved the above-mentioned protocol.



Prof. Dr. G. Rianto Setiabudy, SpFK

*Ethical approval berlaku satu tahun dari tanggal persetujuan

**Peneliti berkewajiban

1. Menjaga kerahasiaan identitas subyek penelitian
2. Memberitahukan status penelitian apabila
 - a. Setelah masa berlakunya keterangan lolos kaji etik, penelitian masih belum selesai, dalam hal ini *ethical clearance* harus diperpanjang
 - b. Penelitian berhenti di tengah jalan

RINCIAN INFORMASI UNTUK RESPONDEN

STUDI MENGENAI PENGALAMAN MASALAH MENYUSUI SELAMA PERIODE ENAM BULAN PERTAMA SETELAH MELAHIRKAN PADA IBU DI KABUPATEN MAROS, PROPINSI SULAWESI SELATAN

Masalah menyusui sangat umum di alami oleh ibu selama periode menyusui, beberapa penelitian menunjukkan bahwa lebih dari 50% ibu mengalami paling tidak satu masalah menyusui selama periode 6 (enam) bulan pertama setelah melahirkan. Keluarga dan petugas kesehatan harus memberikan perhatian serius pada periode ini, karena umumnya masalah menyusui berhubungan erat dengan proses penghentian pemberian ASI, durasi pemberian ASI yang singkat serta kombinasi pemberian ASI dengan susu formula, yang pada akhirnya akan mempengaruhi prevalensi pemberian ASI Eksklusif (Pemberian ASI saja tanpa makanan/minuman ke anak sampai umur 6 bulan).

Penelitian ini bertujuan untuk mendapatkan gambaran tentang pengalaman ibu dalam menghadapi masalah menyusui selama periode enam bulan pertama setelah melahirkan pada ibu di Kabupaten Maros, Propinsi Sulawesi Selatan.

Subyek yang akan berpartisipasi dalam penelitian ini ialah ibu yang memiliki anak umur 6-8 bulan dengan kriteria : penduduk permanent pada wilayah penelitian, anak lahir dengan cukup umur dan tidak lahir kembar, anak lahir dengan berat badan normal (≥ 2500 gram) serta anak dan ibu dalam kondisi sehat. Dari sekian banyak ibu yang memenuhi kriteria tersebut, ibu terpilih secara acak sebagai salah satu bagian pada penelitian ini.

Kami akan melakukan wawancara dan pencatatan data mengenai karakteristik keluarga dan pengalaman ibu tentang masalah menyusui selama periode enam bulan pertama setelah melahirkan. Selanjutnya kami akan melakukan pengukuran berat badan anak ibu dengan menggunakan timbangan berat badan serta melakukan pengukuran panjang /tinggi badan anak dengan alat ukur panjang/tinggi badan. Ketiga kegiatan tersebut (wawancara, pengukuran berat badan dan panjang/tinggi badan) akan membutuhkan waktu kurang lebih 30-60 menit dan tidak akan menimbulkan efek samping pada ibu dan anak.

Informasi yang ibu berikan nantinya akan dimanfaatkan sebagai bahan atau materi untuk memperkuat dan meningkatkan kualitas promosi pemberian ASI Eksklusif, serta dapat digunakan untuk pertimbangan penentuan kebijakan program selanjutnya, khususnya di Kabupaten Maros. Semua informasi yang kami dapatkan akan diperlakukan secara rahasia dan hanya ibu dan petugas berwenang saja dari penelitian ini yang dapat mengetahuinya.

Penelitian ini tidak menyediakan manfaat/keuntungan finansial bagi keluarga ibu apabila ibu berpartisipasi. Sehingga Ibu berhak untuk menolak atau mengundurkan diri dari penelitian ini kapanpun tanpa ada sanksi apapun. Partisipasi ibu adalah sukarela dan tanpa paksaan dalam bentuk apapun atau oleh siapapun, sebagai bukti bahwa ibu bersedia berpartisipasi pada penelitian ini, maka ibu diminta untuk menandatangani lembaran persetujuan. Apabila ibu memerlukan penjelasan lebih lanjut, ibu dapat menghubungi :

1. Manjilala, SGz

Alamat : Kompleks Dosen Jurusan Gizi Poltekkes Makassar, Jl. Paccerakkang KM. 14 Daya. Telpon Kantor : 0411-510197. HP. 085255549979

2. Dr. Ir. Judhiastuty Februhartanty, MSc atau dr. Dian Nurtjahjati Basuki, MSc. IBCLC

Alamat : SEAMEO RECFON – UI, Gedung SEAMEO RECFON-UI Kampus UI Salemba, Jl. Salemba Raya No. 6 Jakarta Pusat, Telepon : 021 3914017, 31930205



KEMENTERIAN DALAM NEGERI
REPUBLIK INDONESIA
DIREKTORAT JENDERAL KESATUAN BANGSA DAN POLITIK
Jl. Medan Merdeka Utara No. 7 Telp. (021) 3450038, Fax (021) 3454270,
Jakarta 10110

Jakarta, 13 Januari 2012


Nomor : 070/ 0166.DI
Lampiran :
Perihal : Penyampaian
Rekomendasi Penelitian

Kepada
Yth. Gubernur Sulawesi Selatan
Up. Kepala Badan Kesbangpol dan
Linmas.

Dalam rangka memperlancar pelaksanaan kegiatan penelitian, bersama ini terlampir disampaikan Rekomendasi Penelitian Nomor: 533.02/0140.D.I Tanggal 12 Januari 2012 atas nama Manjilala, SGz dengan judul proposal Pengalaman Dengan Masalah Menyusui Selama Periode Enam Bulan Pertama Setelah Melahirkan Pada Ibu Di Kabupaten Maros, untuk dapat ditindak lanjuti.

Demikian untuk menjadi maklum dan terimakasih.

a.n. DIREKTUR JENDERAL
KESATUAN BANGSA DAN POLITIK
SEKRETARIS DIJEN,


H. A. RACHMAN, M.Sc., M.Si.
Pembina Utama Madya (IV/c)
NIP. 19520918 198003 1 001

Tembusan Kepada Yth:
Bapak Dirjen Kesbangpol, sebagai laporan.



KEMENTERIAN DALAM NEGERI
REPUBLIK INDONESIA

REKOMENDASI PENELITIAN

Nomor..533.02/0140.D.I

- a. Dasar : 1. Peraturan Menteri Dalam Negeri Nomor 41 Tahun 2010 tentang Organisasi dan Tata Kerja Kementerian Dalam Negeri (Berita Negara Republik Indonesia Tahun 2010 Nomor 316) sebagaimana telah diubah dengan Peraturan Menteri Dalam Negeri 14 Tahun 2011 tentang Perubahan Atas Peraturan Menteri Dalam Negeri Nomor 41 Tahun 2010 tentang Organisasi dan Tata Kerja Kementerian Dalam Negeri (Berita Negara Republik Indonesia Tahun 2010 Nomor 168);
2. Peraturan menteri Dalam Negeri Nomor 64 Tahun 2011 Tentang Pedoman Rekomendasi Penerbitan.
- b. Menimbang : Surat Deputi Diirektur Program Southeast Asian Ministers Of Education Organization Regional Centre For Food And Nutrition (SEAMEO RECFON) Nomor 022A/RECFON-PROG/I/2012 Tanggal 4 Januari 2011 Perihal Permohonan Izin Penelitian


MENTERI DALAM NEGERI, memberikan rekomendasi kepada :

- a. Nama /Obyek : Manjilala, SGz
- b. Jabatan/Tempat/Identit : Mahasiswa Pasca Sarjana UI, Kampus UI Salemba, Jl. Salemba Raya No. 6 Jakarta 10430 Telp. (021) 31930205
- c. Untuk : 1) melakukan penelitian dengan proposal berjudul Pengalaman Dengan Masalah Menyusui Selama Periode Enam Bulan Pertama Setelah Melahirkan Pada Ibu di Kabupaten Maros.
- 2) Lokasi penelitian Provinsi Sulawesi Selatan
- 3) Waktu/lama penelitian Januari 2012 s.d Juni 2012

Demikian Rekomendasi ini dibuat untuk diperlukan seperlunya.

Jakarta, 12 Januari 2012
a.n. MENTERI DALAM NEGERI
DIREKTUR JENDERAL
KESATUAN BANGSA DAN POLITIK

A. TANRIBALI L.


PEMERINTAH KABUPATEN MAROS
BADAN KESBANG POL. DAN LINMAS
Jln.Azalea Ruko Terminal Baru Maros No.15 Tlp.(0411)373472 Kode Pos 90511

Maros, 18 Januari 2012

Nomor : 070/25/Kesbangpol

Lampiran : -

Perihal : Izin Penelitian/Pengambilan Data

K e p a d a
Yth. 1.Camat Turikale Kab.Maros
2.Camat Lau Kab.Maros
Di,-
Maros

Berdasarkan Surat dari Ka.Balitbangda Prov.Sul-Sel Nomor: 070.5.1/328/Balitbangda Tanggal 13 Januari 2012 Perihal Izin Penelitian/Pengambilan Data, menerangkan bahwa :

Nama : Manjilala, SGz
Tempat, tanggal lahir : Maros, 9 Oktober 1977
Alamat : Komp.Gizi Depkes No.C4 Berua Mks
Jenis Kelamin : Laki-laki
Pekerjaan : Mahasiswa
Nomor Pokok : 1006755891
Program Studi :

Bermaksud mengadakan Pengambilan Data/Penelitian di Instansi Saudara dalam rangka penulisan Skripsi / Tesis dengan Judul :

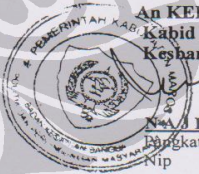
“ PENGALAMAN DENGAN MASALAH MENYUSUI SELAMA PERIODE ENAM BULAN PERTAMA SETELAH MELAHIRKAN PADA IBU DI KABUPATEN MAROS, PROVINSI SULAWESI SELATAN ”

Selama : Tmt. 18 Januari 2012 s/d 13 April 2012
Pengikut : Tidak Ada

Pada prinsipnya kami dapat menyetujui kegiatan tersebut di atas dengan ketentuan sebagai berikut:

1. Sebelum dan sesudah melaksanakan kegiatan tersebut melaporkan diri kepada Bupati Maros Cq.Kepala Badan Kesbangpol dan Linmas Kab. Maros.
2. Penelitian / Pengambilan Data di maksud tidak menyimpang dari ketentuan yang berlaku dan semata-mata untuk kepentingan ilmiah.
3. Mentaati semua Ketentuan yang berlaku dan mengindahkan Adat istiadat setempat.
4. Menyerahkan 1 (satu) rangkap Draft Proposal Penelitian/Pengambilan Data dimaksud kepada Bupati Maros Cq. Kepala Badan Kesbangpol dan Linmas Kabupaten Maros
5. Segala biaya yang berhubungan dengan kegiatan tersebut ditanggung oleh yang bersangkutan.

Demikian Izin Penelitian / Pengambilan Data ini untuk dipergunakan sebagaimana mestinya.


An KEPALA
Kabid Pengem.& Pend.Politik
Kesbang
MAJIB,SH
Pangkat : Pembina
Nip : 19651231 199401 1 005

Tembusan Kepada Yth:

1. Bupati Maros (sebagai laporan) di Maros
2. Kepala Inspektorat Kab. Maros di Maros
3. Kadis Kesehatan Kab.Maros di Maros
4. Pjs.Deputi Dir.Prog.Seameo Recfon di Jakarta
5. Yang bersangkutan.



PEMERINTAH PROVINSI SULAWESI SELATAN
BADAN PENELITIAN DAN PENGEMBANGAN DAERAH
 Jalan Urip Sumohardjo No. 269 Telp. 436936-436937 FAX. 436934
Makassar (90231)

Makassar, 13 Januari 2012

Nomor : 070.5.1/ **328** /Balitbangda
 Lampiran : -
 Perihal : Izin/Rekomendasi Penelitian

Kepada

Yth. Bupati Maros

Di

Maros

Berdasarkan surat Pjs. Deputi Direktur Program SEAMEO RECFON Jakarta nomor : 022B/RECFON-PROG/II/2012 tanggal 04 Januari 2012 perihal tersebut diatas, peneliti dibawah ini:

Nama : Ketua : 1. Manjilala, SGz
 Anggota : 2. Dr. Judhiastuty Februhartanty, MSc
 Anggota : 3. dr. Dian Nurtjahjati Basuki, MSc, IBCLC
 Lembaga : SEAMEO RECFON
 Alamat : Jl. Salemba Raya No. 6, Jakarta

Bermaksud untuk melakukan penelitian di daerah/kantor saudara, dengan judul:

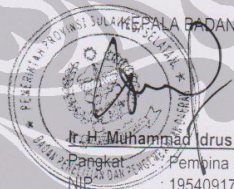
"PENGALAMAN DENGAN MASALAH MENYUSUI SELAMA PERIODE ENAM BULAN PERTAMA SETELAH MELAHIRKAN PADA IBU DI KABUPATEN MAROS, PROVINSI SULAWESI SELATAN"

Yang akan dilaksanakan dari :Tgl. 13 Januari s/d 13 April 2012

Sehubungan dengan hal tersebut diatas, pada prinsipnya kami **menyetujui** kegiatan dimaksud dengan ketentuan :

1. Sebelum dan sesudah melaksanakan kegiatan, kepada yang bersangkutan melapor kepada Bupati/Walikota Cq. Kepala Bappeda/Balitbangda, apabila kegiatan dilaksanakan di Kab./Kota;
2. Penelitian tidak menyimpang dari izin yang diberikan;
3. Mentaati semua peraturan perundang-undangan yang berlaku dan mengindahkan adat istiadat setempat;
4. Menyerahkan 2 (dua) eksemplar copy hasil penelitian kepada Gubernur Sulsel.Cq. Kepala Badan Penelitian dan Pengembangan Daerah Propinsi Sulawesi Selatan;
5. Surat izin akan dicabut kembali dan dinyatakan tidak berlaku apabila ternyata pemegang surat izin ini tidak mentaati ketentuan tersebut di atas.

Demikian disampaikan untuk dimaklumi dan dipergunakan seperlunya.



Jr. H. Muhammad Idrus Hafied

Pangkat : Pembina Utama Muda
 NIP : 19540917 198203 1 005

TEMBUSAN :Kepada Yth:

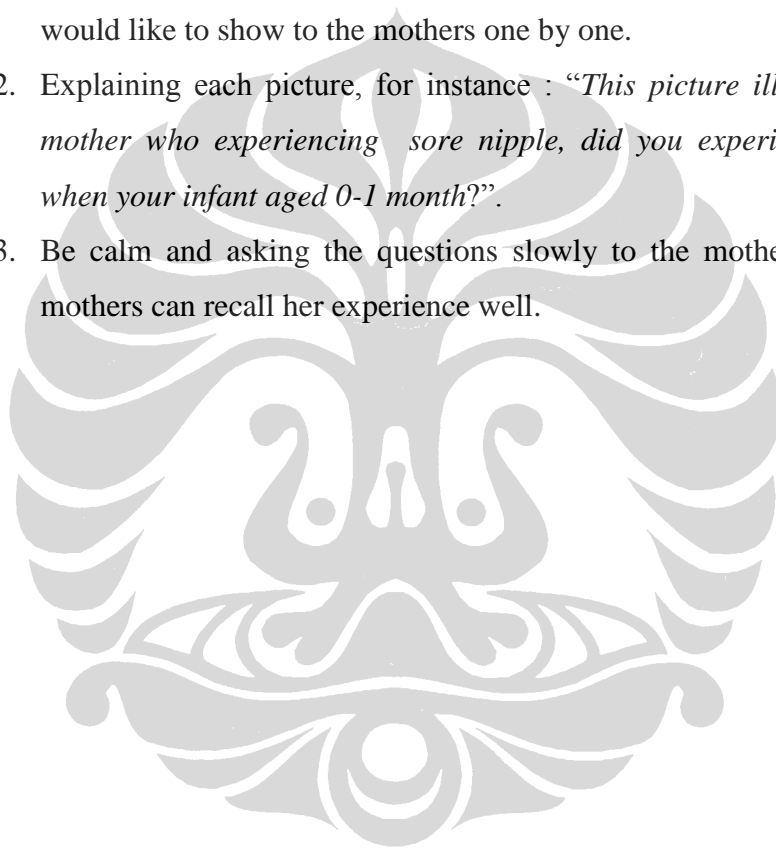
1. Gubernur Sulawesi Selatan di Makassar (sebagai laporan);
2. Pjs. Deputi Direktur Program SEAMEO RECFON Jakarta;
3. Kepala Badan Lintas Kabupaten dan Kota Prov. Sulsel;
4. Peneliti yang bersangkutan;
5. Pertinggal.

THE GUIDELINES OF USING FLASH CARDS

Notes :

Follow the procedure when you ask to the mothers regarding her experience of breastfeeding problems, and all responses of mothers were recorded on the questionnaire.

1. Reminded the mothers that the questions were divided into three parts i.e., When infant aged 0-1 month, 1-3 months and 3-6 months, and enumerators would like to show to the mothers one by one.
2. Explaining each picture, for instance : *“This picture illustrates regarding a mother who experiencing sore nipple, did you experience the same thing when your infant aged 0-1 month?”*.
3. Be calm and asking the questions slowly to the mothers, in order that the mothers can recall her experience well.





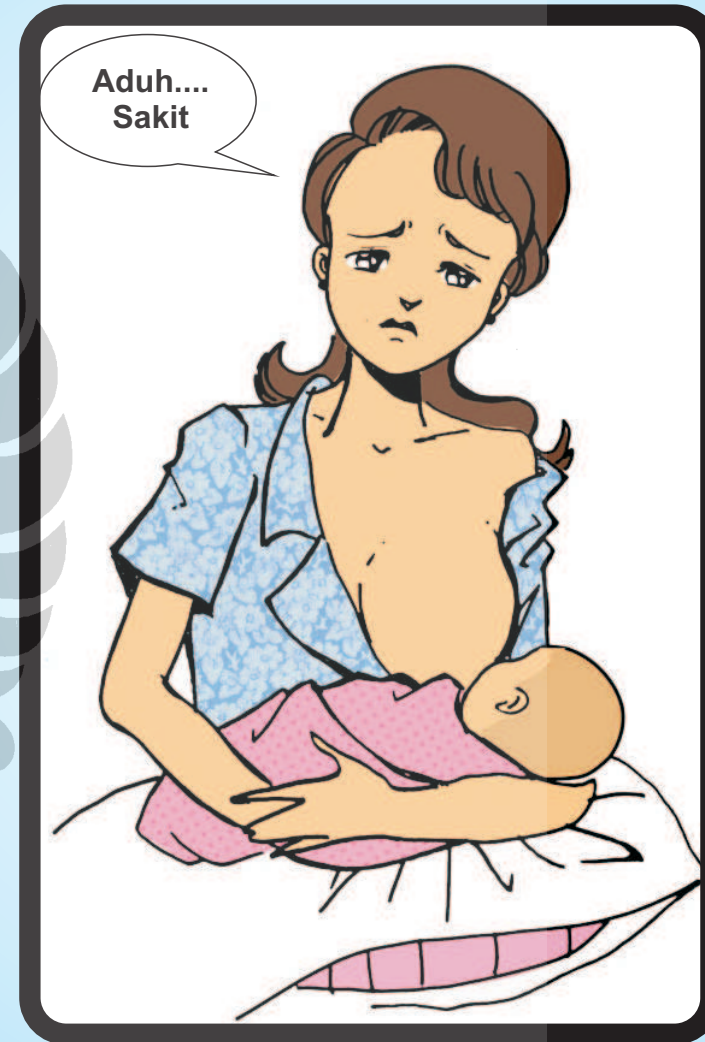
MASALAH MENYUSUI

PERIODE UMUR ANAK 0-1 BULAN



UMUR 0-1 BULAN

No. 1



Nyeri saat menyusui





UMUR 0-1 BULAN

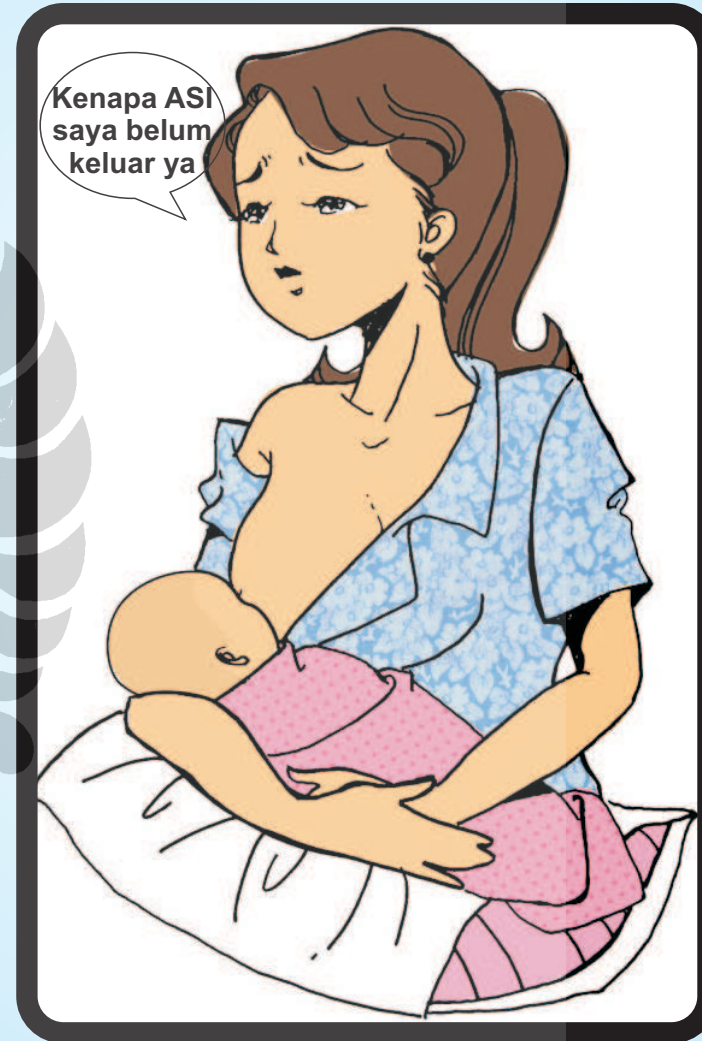


No. 2

Ibu lagi sakit



UMUR 0-1 BULAN



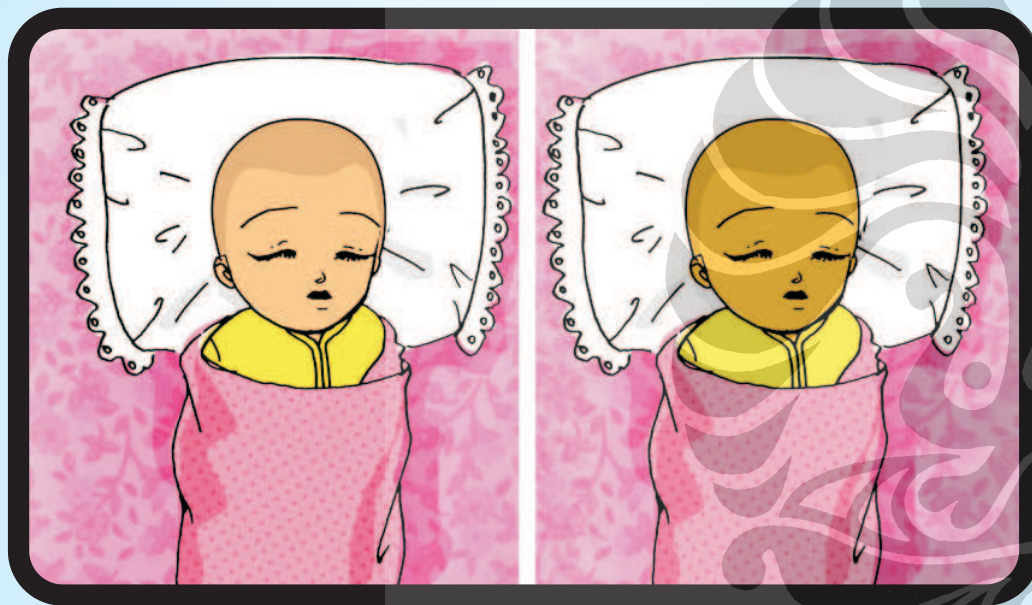
No. 3

ASI tidak/belum keluar



UMUR 0-1 BULAN

No. 4



Kulit bayi kekuningan



UMUR 0-1 BULAN

No. 5

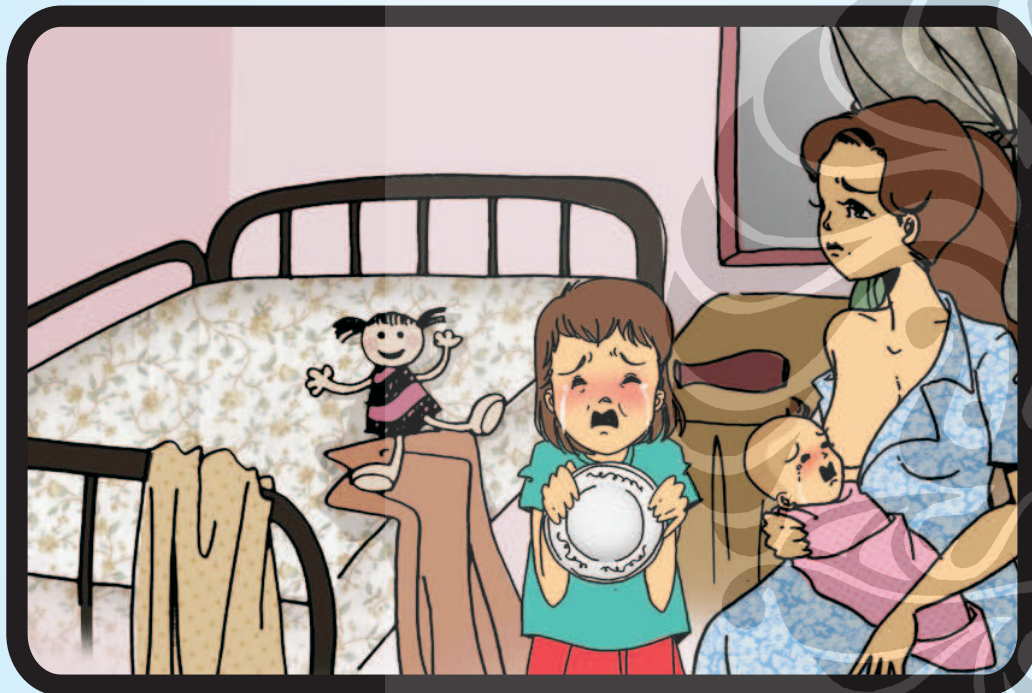


Ibu melahirkan dengan cara cesar



UMUR 0-1 BULAN

No. 6



Ibu capek dan letih



UMUR 0-1 BULAN

No. 7

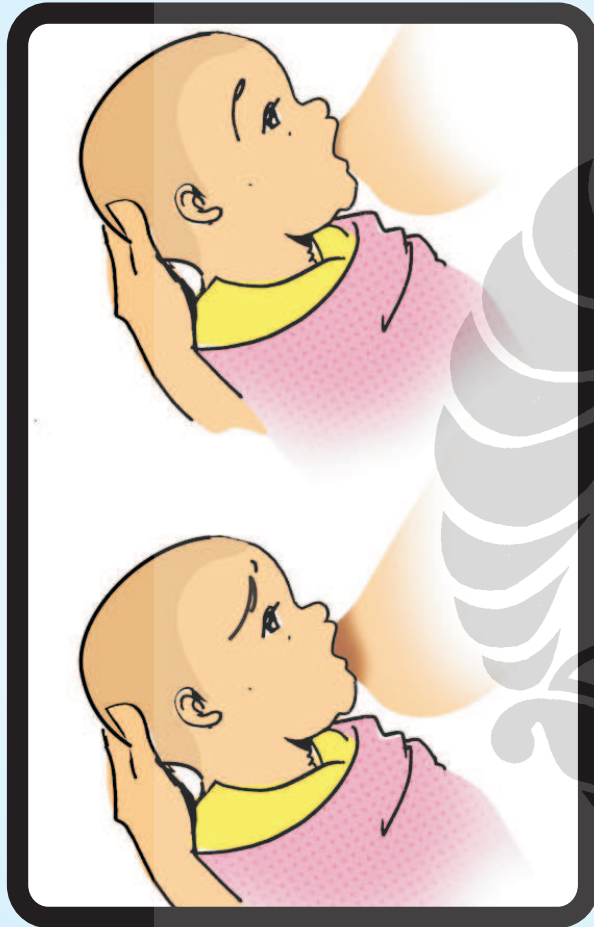


Ibu bingung atau tidak menemukan posisi menyusui yang nyaman



UMUR 0-1 BULAN

No. 8

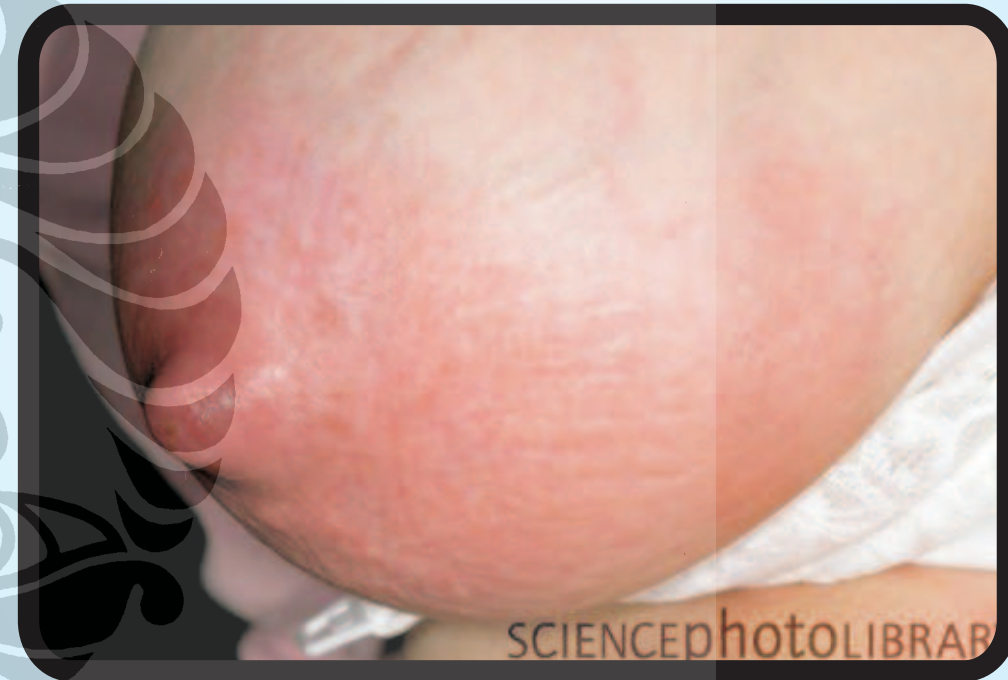


**Anak susah menetek
(kesulitan pelekatan)**



UMUR 0-1 BULAN

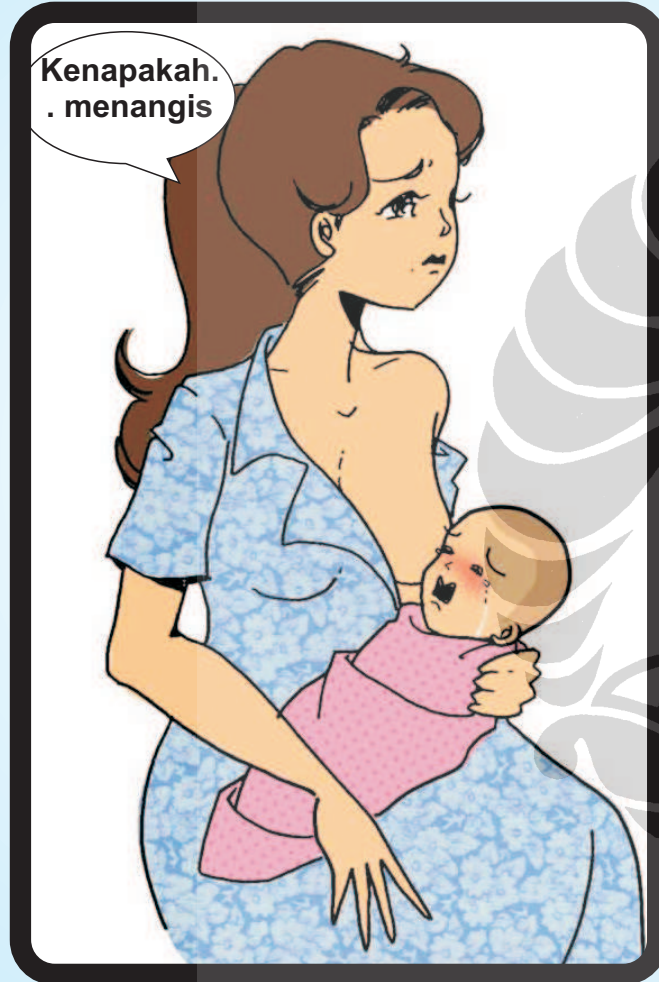
No. 9



Payudara ibu bengkak



UMUR 0-1 BULAN

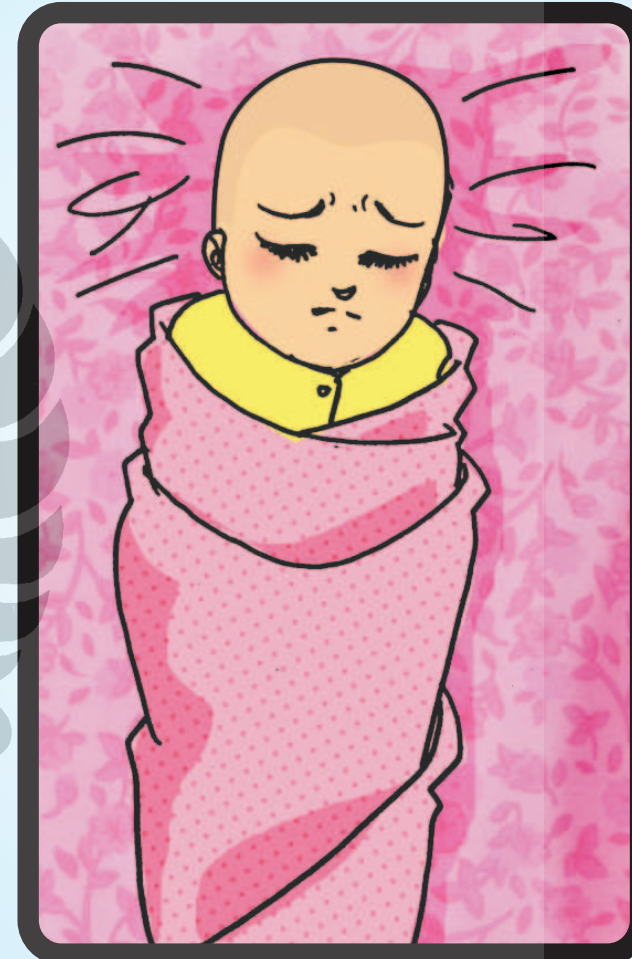


No. 10

**Bayi rewel/menolak
menyusui**



UMUR 0-1 BULAN



No. 12

Bayi lagi sakit



UMUR 0-1 BULAN

No. 11

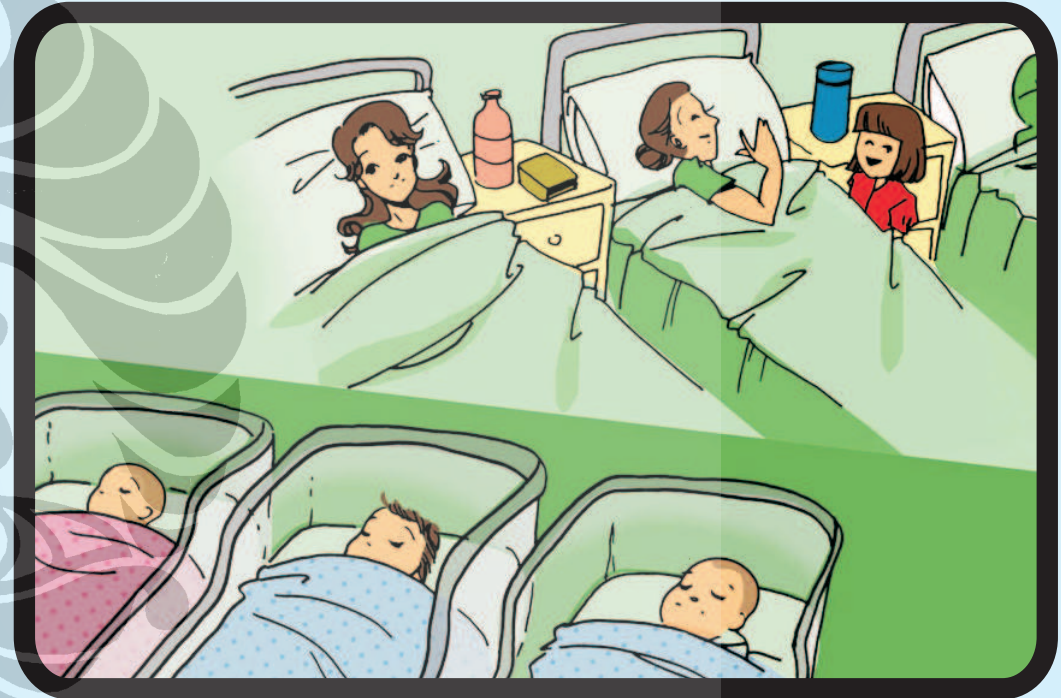


Puting lecet



UMUR 0-1 BULAN

No. 13

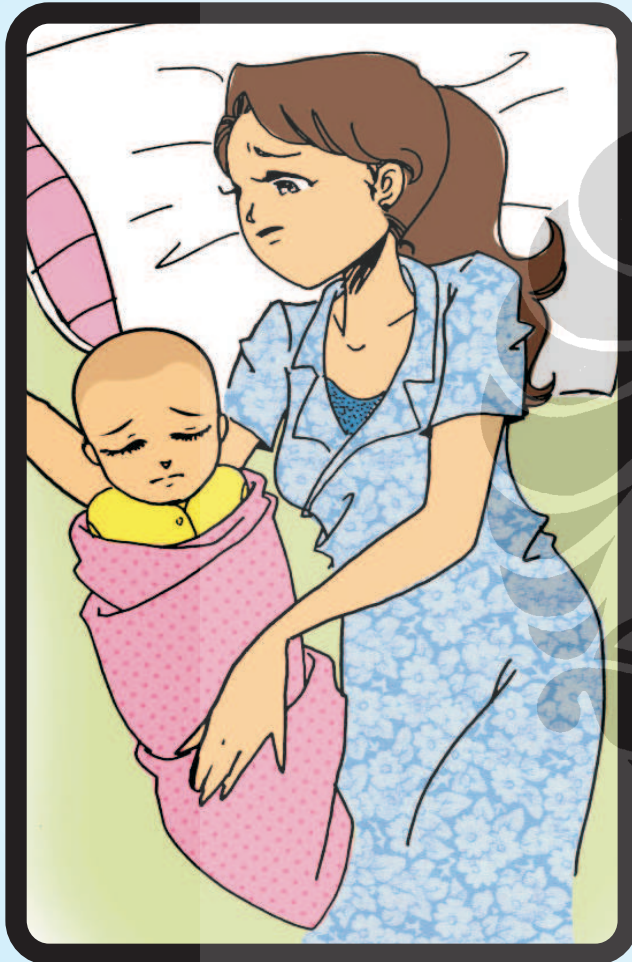


Waktu di RS, bayi dan ibu dipisah



UMUR 0-1 BULAN

No. 14

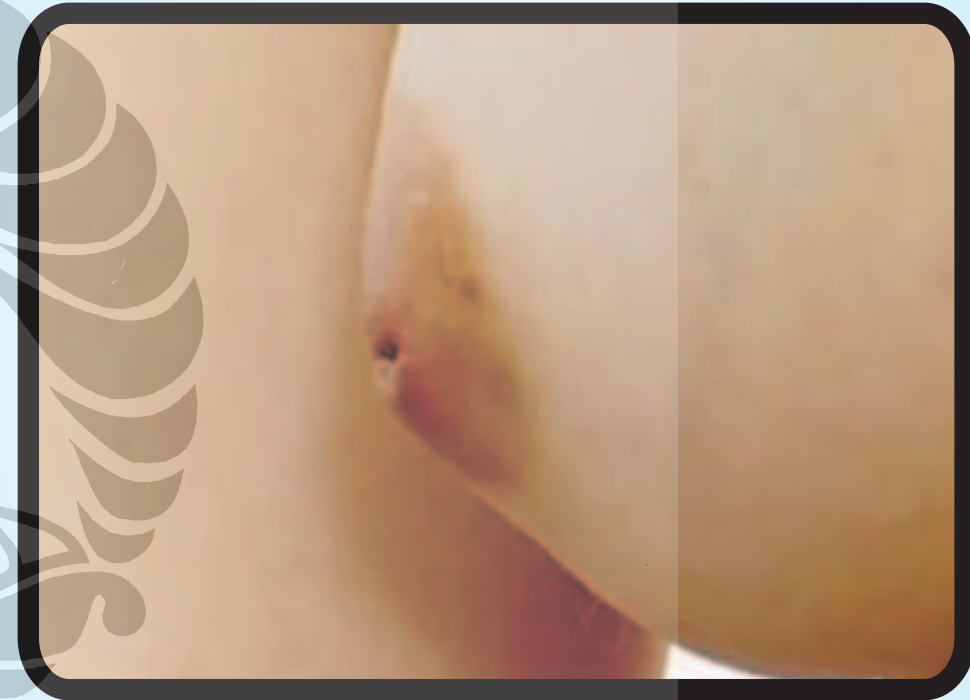


Anak tidur terus



UMUR 0-1 BULAN

No. 15



Puting terbenam



UMUR 1-3 BULAN

No. 1



MASALAH MENYUSUI

PERIODE UMUR ANAK 1-3 BULAN

ASI kurang





UMUR 1-3 BULAN

Aduh....
sakit



No. 2

Nyeri saat menyusui



UMUR 1-3 BULAN

No. 3



Ibu capek dan letih



UMUR 1-3 BULAN



No. 4



Ibu bingung atau tidak menemukan posisi menyusui yang nyaman



UMUR 1-3 BULAN

No. 5



Payudara ibu bengkak



UMUR 1-3 BULAN

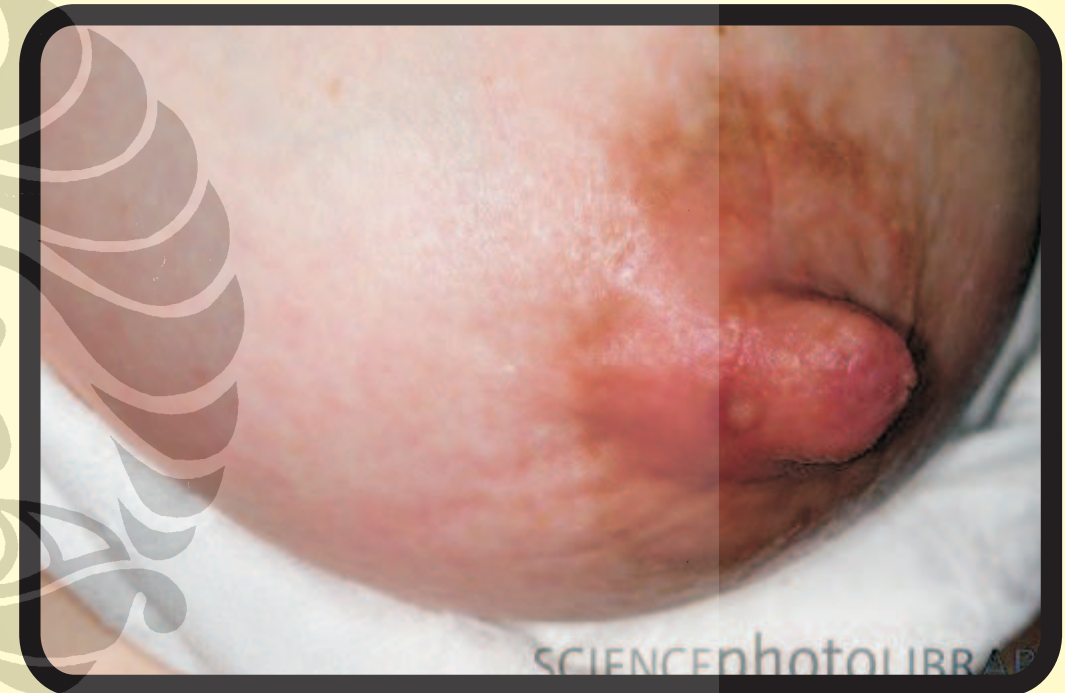


No. 6

Bayi rewel/menolak menyusui



UMUR 1-3 BULAN



No. 7

Puting lecet



UMUR 1-3 BULAN

No. 8



Bayi lagi sakit



UMUR 1-3 BULAN

No. 9



Berat badan bayi tidak naik-naik



UMUR 1-3 BULAN

No. 10

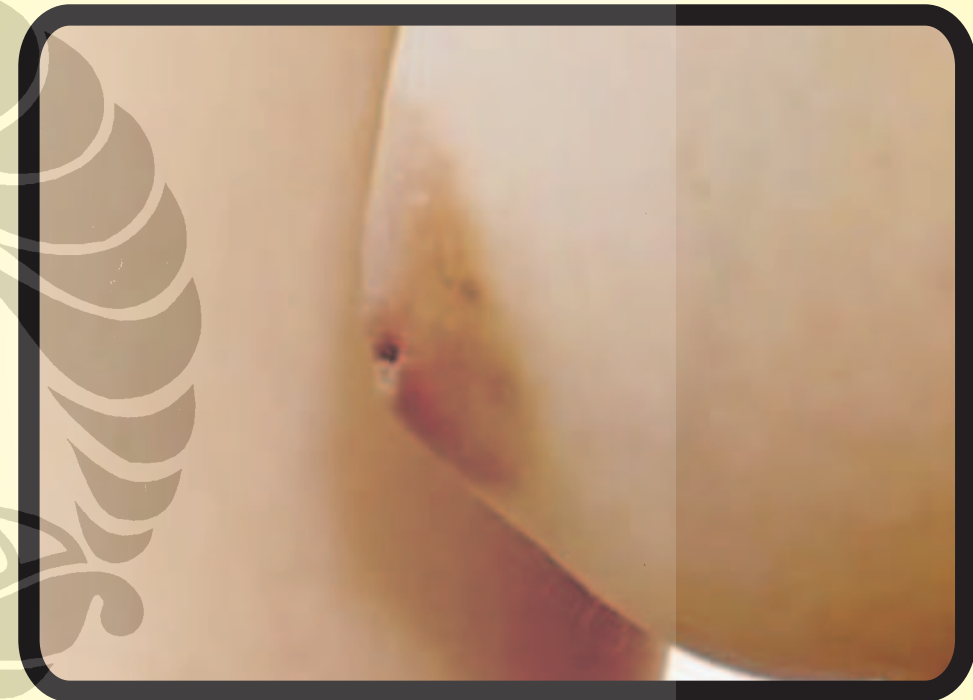


Bayi susah buang air besar



UMUR 1-3 BULAN

No. 11



Puting terbenam



UMUR 1-3 BULAN

No. 12



Masa cuti sudah habis



UMUR 1-3 BULAN

No. 13



Ibu sibuk bekerja



UMUR 3-6 BULAN



No. 1



MASALAH MENYUSUI

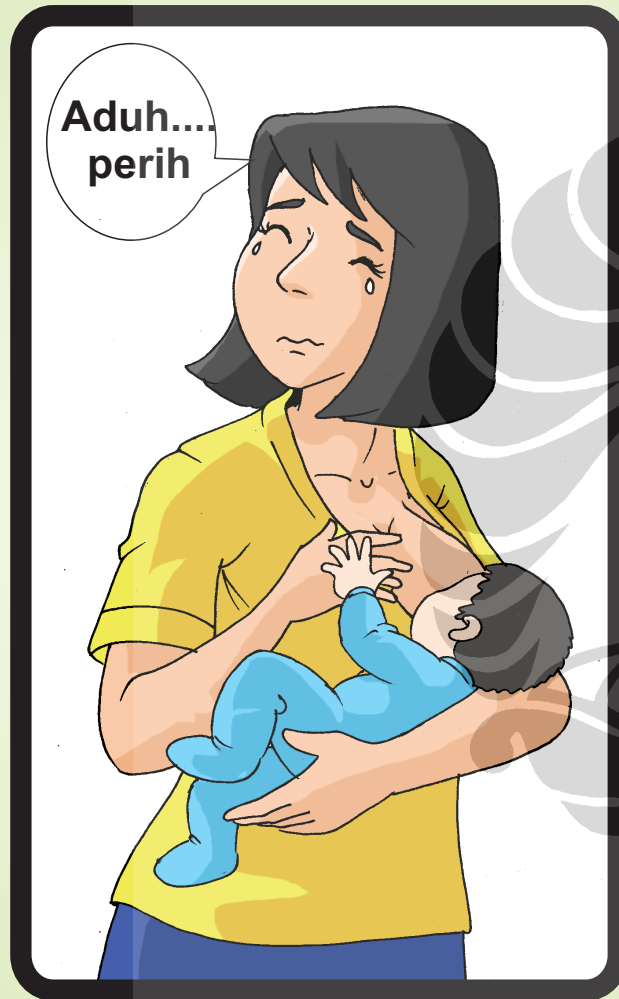


PERIODE UMUR ANAK 3-6 BULAN

ASI kurang



UMUR 3-6 BULAN



No. 2

Nyeri saat menyusui



UMUR 3-6 BULAN



No. 3

Ibu capek dan letih



UMUR 3-6 BULAN



No. 4

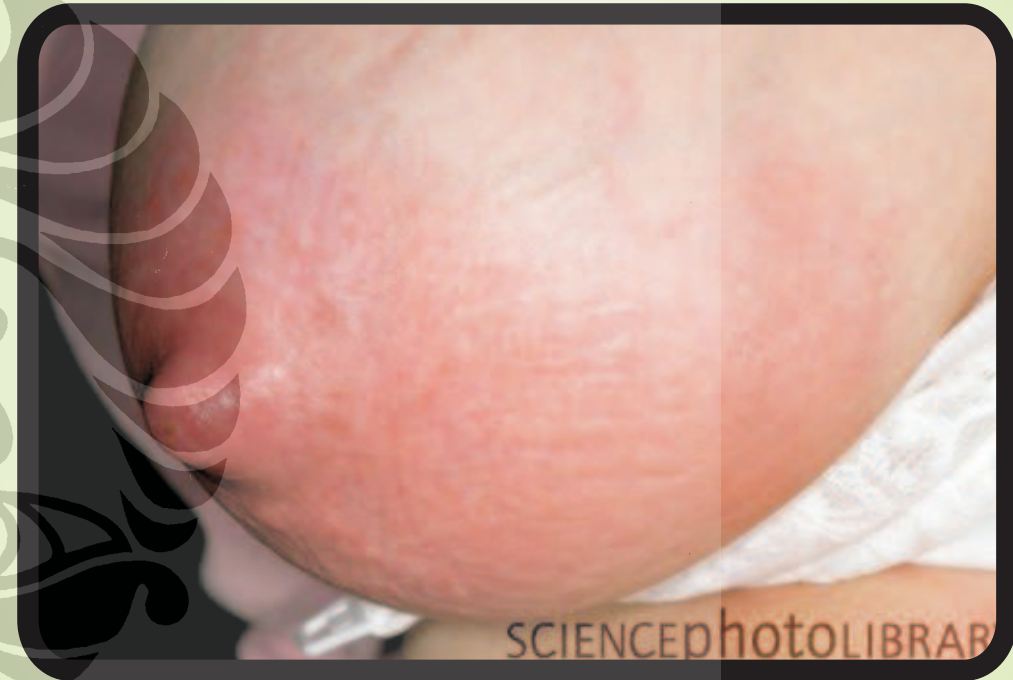


Ibu bingung atau tidak menemukan posisi menyusui yang nyaman



UMUR 3-6 BULAN

No. 5



Payudara ibu bengkak



UMUR 3-6 BULAN



No. 6

**Bayi rewel/menolak
menyusui**



UMUR 3-6 BULAN



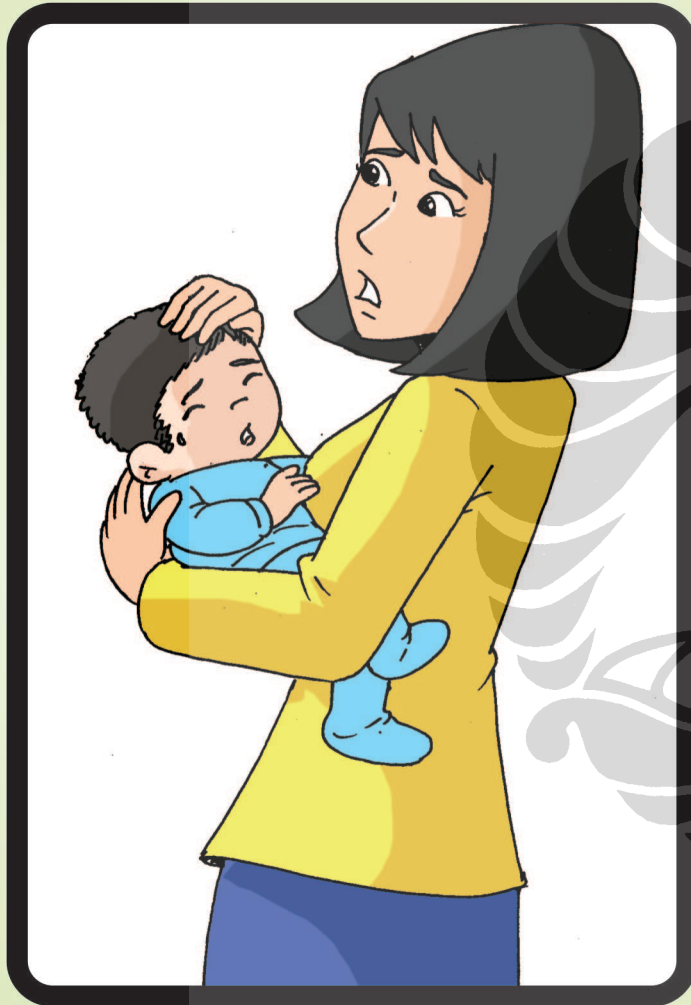
No. 7

Puting lecet



UMUR 3-6 BULAN

No. 8



Bayi lagi sakit



UMUR 3-6 BULAN

No. 9



Berat badan bayi tidak naik-naik



UMUR 3-6 BULAN

No. 10



**Bayi susah buang air
besar**

the Experience of..., Manjilala, FK UI, 2012



UMUR 3-6 BULAN

No. 11



Puting terbenam

the Experience of..., Manjilala, FK UI, 2012



UMUR 3-6 BULAN

No. 12



Ibu sibuk bekerja



UMUR 3-6 BULAN

No. 13



Ibu lagi sakit



**THE EXPERIENCE OF BREASTFEEDING PROBLEMS
DURING THE FIRST SIX MONTHS PERIOD AMONG MOTHER
HAVING INFANTS AGED 6-12 MONTHS IN TWO SUB DISTRICT,
MAROS DISTRICT, SOUTH SULAWESI PROVINCES**



**South East Asian Ministers of Education Organization (SEAMEO)
Regional Center for Food and Nutrition (RECFON) - Universitas Indonesia (UI)
Jl. Salemba Raya 6 Jakarta Pusat
Telp. : (021) 31930205, Fax : (021) 3913933**

Note: "(Greetings) I am (your name) research team from SEAMEO RECFON-University of Indonesia. We were here in the context of survey regarding the experience of breastfeeding problem among mother during the exclusive period in Maros District. This survey has obtained permission from Maros District authority. Incidentally you are randomly selected to participate in our surveys, and interviews are part of our survey. We will be kept strictly confidential and will only be used for survey purposes.

Approval: Before I started the interview, I would like to apply for approval to you, with a sign or give your fingerprint on this form. In this interview, I will ask you some questions related to your experiences during the exclusive breastfeeding period. I also ask permission to measure weight and height your child. There is no significant risk from this measurement. Your participation is VOLUNTARY, if you are objected, you can refuse to be interviewed, without any sanctions. University of Indonesia, SEAMEO RECFON ensured the confidentiality of information that mothers have to say. By signing or giving your fingerprint on this form, you are agreed to participate in this study. We will be pleased, If you have questions

(assignment/fingerprint) _____ (name) _____ (date) _____

We will appreciate for your participation

Date of Interview :/...../.....(dd/mm/yy)	Time of Interview :to.....				
Interviewer					
01. Manjilala	02. Ina Yuliani	03. A. Hadian	04. Ismawati	05. Intan	[] [] []

A. IDENTITY OF RESPONDENT					Var. Code		
I. Sub District : 1. Lau		2. Turikale			IR_SUBDIS		
I. Villages					IR_VILL		
1. Allepolea	4. Marannu	7. Boribellaya	10. Alliritenggae	13. Taroad			
2. Maccini Baji	5. Bonto Marannu	8. Raya	11. Adatongeng				
3. Soreang	6. Mattiro Deceng	9. Turikale	12. Pettuadae				
II. Sub Villages					IR_SUBVIL		
1. Pam. Je'ne	8. Bonto cabu	15. Balombong	22. Kokoa	29. Tamala'lang	36. Talamangape 2	43. Tumalia	50. Labuang
2. B. Kappetta I	9. Lemo-lemo	16. Langkeang	23. Tangkuru	30. Pasandang	37. Reda beru	44. Kalli-kalli	51. Kassi
3. B. Kapetta II	10. B. kadatto	17. Sampobia	24. tambua	31. Bulowa	38. Solojirang 1	45. B. Puasa	52. Pappadangeng
4. Kasuarang	11. Bonto rea	18. Soreang	25. Tanring mata	32. Nipa	39. Solojirang 2	46. Maccopa	53. Butta toa 1
5. B. Manai	12. Belang-belang	19. Macoa	26. Marampesu	33. kacempureng	40. Kassi polong	47. Sanggalea	54. Butta Toa 2
6. Talamangape	13. Pute	20. Kalokko	27. Tapieng	34. B. jolong	41. Manaungi	48. Baniaga	55.
7. Maccini ayo	14. Galaggara	21. Marana	28. Majannang	35. Pacelle	42. Perumnas	49. Ballu-ballu	56.

III. Demography Data		Var. Code
1. Name of mother		DD_NM
2. Age of mother	[][] years	DD_AGM
3. Occupation of mother	[]	DD_JOBM
4. Education of mother	[]	DD_EDUM
5. Religion of mother	[]	DD_REM
6. Ethnic of mother	[]	DD_ETCM
7. Relationship with infant	[]	DD_RELM
8. Name of husband		DD_NF
9. Age of husband	[][] tahun	DD_AGF
10. Occupation of husband	[]	DD_JOBH
11. Education of husband	[]	DD_EDUH
12. Religion of husband	[]	DD_REH
13. Ethnic of husband	[]	DD_ETCH
14. Relationship with infant	[]	DD_RELH
15. Number of family member	[][]	DD_NFM
16. Number of Under five children	[]	DD_NU5
<p>III.3 & III.10 Occupation</p> <p>1. Civil servant/military/police 2. Private employee 3. Self employed (barang campuran/sayuran/ikan) 4. Entrepreneur (hasil bumi/kerajinan/makanan) 5. Owning farmer (tambak/padi) 6. Laborer (tani/bangunan/tukang kayu/tukang batu) 7. Pension 8. Domestic servant 9. House wife 10. No occupation 77. Others (specify....) 88. Do not know 99. No answer</p> <p>III.4 & III.11 Education</p> <p>1. Never been to school 2. did not passed of elementary school 3. passed of elementary school 4. did not passed of junior high school 5. passed of junior high school 6. did not passed of high school 7. passed of high school 8. undergraduate 66. no to 88. do not know 99. No answer</p> <p>III.5 & III.12 Religion</p> <p>1. Islam 2. Kristen (Katolik/Protestan) 3. Hindu 4. Budha 77. Others (specify....)</p> <p>III.6 & III.13 Ethnic</p> <p>1. Bugis 2. Makassar 3. Mandar 4. Toraja 5. Jawa 6. Bali 7. Madura 77. lain-lain (sebutkan....)</p> <p>III.7 & III.14 Relation with the infant</p> <p>1. Ibu kandung 2. Ibu tiri 3. Ayah kandung 4. Ayah tiri 77. lain-lain (sebutkan....)</p>		

B. IDENTITY OF CHILD		Var. Code
1. Name of child		IC_NC
2. Sex : 1) Male 2) Female	[]	IC_SEX
3. Date of Birth (dd/mm/yy)	___/___/_____	IC_DOB
4. Weight	[][] kg [][] kg	IC_WEIGHT
5. Height	[][] cm [][] cm	IC_HEIGHT

C. GENERAL INFORMATION OF INFANT FEEDING		Variable code
1	Where did you delivery? 1. Hospital/PHC 2. Midwife's house/clinic 3. Home 88. Do not know 99. No answer	[] BFP_DEL
2	Do you still breastfeed? 1. Yes, go to Q. 5 2. No 88. Do not know 99. No answer	[] BFP_STL1
3	If not, when did you stop breastfeed? (Probe: age of child)	[] BFP_STL2
4	Why did you stop breastfeed?	BFP_STL3
5	How did process of breastfeed on the first time? 1. Baby immediately placed on my chest & he/she found my nipple 2. Baby immediately cleared by the midwife then placed beside me to breastfeed 77. Other (specify.....) 88. Do not know 99. No answer	[] BFP_IMD
6	Did you give any food or liquid to your child directly after birth? 1. Yes 2. No, go to Q.10 88. Do not know 99. No answer	[] BFP_PREL1
7	If yes, what is type of food or liquid? 1. Honey 2. Kurma 3. Coconut water 77. Other (specify.....) 88. Do not know 99. No answer	[] BFP_PREL2
8	How to gave? 1. Smear on the lips 2. Feed to the baby 77. Other (specify.....) 88. Do not know 99. No answer	[] BFP_PREL3
9	Who did suggests you? 1. Husband 2. Parents 3. Parents in law 77. Other (specify.....) 88. Do not know 99. No answer	[] BFP_PREL4
10	During aged 0-6 moths, did you give any food/drink? 1. Yes 2. No, go to POINT D (experience of breastfeeding problems) 88. Do not know 99. No answer	[] BFP_CF1
11	If yes, at what age?	[][] bulan BFP_CF2
12	What type of food?	BFP_CF3
13	Did you give food once or continous? 1. Once 2. Continous 88. Do not know 99. No answer	[] BFP_CF4
14	Why did you give the food?	BFP_CF4
15	Who is suggest you? 1. Husband 2. Parents 3. Parents in law 4. No anybody, initiative my self 77. Other (specify.....) 88. Do not know 99. No answer	[] BFP_CF5

D. THE EXPERIENCE OF BREASTFEEDING PROBLEMS ON THE AGE 0-1 MONTH

1. According to your experience, can you show to me which one from this picture have you experienced when your infant was aged 0-1 months

No	What type of breastfeeding problems	What did you do?	Who provided helped/support	What type of support	How did your infant feeding
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Summary

1	Type of breastfeeding problems	1.		EBP01TY1
		2.		EBP01TY2
		3.		EBP01TY3
		4.		EBP01TY4
		5.		EBP01TY5
2	What is mother done to solve her problem?	1. Looking for assistances		EBP01OC
		2. Treated self		
		3. Ignoring		
		4. Others		
3	Who is helped/ supported?	1. Husband		EBP01SP
		2. Parent/Parent in law		
		3. Family		
		4. Community/friend		
		5. Health staff		
		6. Others		
4	What type of supported?	1. Seeking for information		EBP01TOS
		2. Manag the problem		
		3. Provide information		
		4. Others		
5	How did her infant feeding practice?	1. Countinued breastfeeding		EBP01IFP
		2. Stopped breastfeeding temporary and Complement breastmilk with formula milk/other food		
		3. Stopped breastfeeding permanently and substituted breastmilk with formula milk/other food		

2. According to your experience, can you show to me which one from this picture have you experienced when your infant was aged 1-3 months

No	What type of breastfeeding problems	What did you do?	Who provided helped/support	What type of support	How did your infant feeding
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Summary

1	Type of breastfeeding problems	1.		EBP13TY1
		2.		EBP13TY2
		3.		EBP13TY3
		4.		EBP13TY4
		5.		EBP13TY5
2	What is mother done to solve her problem?	1. Looking for assistances		EBP13OC
		2. Treated self		
		3. Ignoring		
		4. Others		
3	Who is helped/ supported?	1. Husband		EBP13SP
		2. Parent/Parent in law		
		3. Family		
		4. Community/friend		
		5. Health staff		
		6. Others		
4	What type of supported?	1. Seeking for information		EBP13TOS
		2. Manag the problem		
		3. Provide information		
		4. Others		
5	How did her infant feeding practice?	1. Countinued breafeeding		EBP13IFP
		2. Stopped breastfeeding temporary and Complement breastmilk with formula milk/other food		
		3. Stopped breastfeeding permanently and substituted breastmilk with formula milk/other food		

3. can you show to me which one from this picture have you experienced when your infant was aged 3-6 months

No	What type of breastfeeding problems	What did you do?	Who provided helped/support	What type of support	How did your infant feeding
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Summary

1	Type of breastfeeding problems	1.		EBP36TY1
		2.		EBP36TY2
		3.		EBP36TY3
		4.		EBP36TY4
		5.		EBP36TY5
2	What is mother done to solve her problem?	1. Looking for assistances		EBP36OC
		2. Treated self		
		3. Ignoring		
		4. Others		
3	Who is helped/ supported?	1. Husband		EBP36SP
		2. Parent/Parent in law		
		3. Family		
		4. Community/friend		
		5. Health staff		
		6. Others		
4	What type of supported?	1. Seeking for information		EBP36TOS
		2. Manag the problem		
		3. Provide information		
		4. Others		
5	How did her infant feeding practice?	1. Countinued breatfeeding		EBP36IFP
		2. Stopped breastfeeding temporary and Complement breastmilk with formula milk/other food		
		3. Stopped breastfeeding permanently and substituted breastmilk with formula milk/other food		

E. The exposure to breastfeeding information

1	Did you ever get breastfeeding education (Penyuluhan)? 1. Yes 2. No, go to Q.8 88. Do not know 99. No answer	[]	EBI_EBF1
2	If yes, when was the activity carried out? 1. Before delivery 2. After delivery 88. Do not know 99. No answer	[]	EBI_EBF2
3	Where was the activity carried out? 1. Hospital 2. Private clinic 3. Posyandu 77. Other (specify.....) 88. Do not know 99. No answer	[]	EBI_EBF3
4	Who is deliver the education? 1. Medical doctor 2. Midwife 3. Nutritionist 77. Other (specify.....) 88. Do not know 99. No answer	[]	EBI_EBF4
5	What is kind of the education? 1. Lecturer 2. Lecturer and practice 88. Do not know 99. No answer	[]	EBI_EBF5
6	What is content the education? (Probe: topic of breastfeeding problem)		EBI_EBF6
7	How do you think about the materials? 1. As needed/useful 2. Just common 3. Not appropriate 77. Other (specify.....) 88. Do not know 99. No answer	[]	EBI_EBF7
8	Did you ever heard Breastfeeding/lactation counselor? 1. Yes 2. No 88. Do not know 99. No answer	[]	HS_CL1
9	If yes, what do you know about Breastfeeding/lactation counselor?		HS_CL2
10	Where did you know the Breastfeeding/lactation counselor?		HS_CL3
11	Did you use their services? 1. Yes 2. No 88. Do not know 99. No answer	[]	HS_CL4
12	If yes, how many time did you use their services?	[] []	HS_CL5
13	Why did you use their services?		HS_CL6
14	What is taught by the breastfeeding counselor?		HS_CL7
15	How do you think about their services? 1. As needed/useful 2. Just common 3. Not appropriate 77. Other (specify.....) 88. Do not know 99. No answer	[]	HS_CL8

F. Breastfeeding knowledge

1	According to you, Until what age a infant should be breastfeed? 1. Six months 2. one years 3. two years or beyond 77. Others 88. Do not know 99. No answer	[]	BK1
2	According to you, Until what age a infant should be give only breast milk? 1. six months 2. one years 3. two years or beyond 77. Others 88. Do not know 99. No answer	[]	BK2
3	According to you, How frequent baby should be breastfeed? 1. On demand 2. Scheduled (at morning, evening and night) 77. Others 88. Do not know 99. No answer	[]	BK3
4	According to you, at what age the baby should be introduced to complementary food? 1. less than 6 months 2. after 6 months 3. after 12 months 77. Others 88. Do not know 99. No answer	[]	BK4
5	According to you, What is influencing the breast milk production? 1. Breast size 2. Duration/frequency of breastfeeding and emotional condition of mother 3. Nutritional status of mother 77. Others 88. Do not know 99. No answer	[]	BK5
6	According to you, How breastfeeding practice if mother has any breastfeeding problems? 1. Continued 2. Stopped temporary 3. Stopped permanently 77. Others 88. Do not know 99. No answer	[]	BK6
7	According to you, What is causing breast engorgement? 1. Restriction on the duration and frequency of breastfeeding 2. Consume specific food 3. Infection of virus 77. Others 88. Do not know 99. No answer	[]	BK7
8	According to you, What is causing sore nipple? 1. Improper positioning and inappropriate latch-on 2. Breast size 3. growing teeth of baby 77. Others 88. Do not know 99. No answer	[]	BK8
9	According to you, What is causing breast refusal by the baby? 1. Using pacifier and or baby got illness 2. Mother got illness 3. Baby is still too full 77. Others 88. Do not know 99. No answer	[]	BK9
10	According to you, What is causing insufficient infant weight gain during breastfeeding period? 1. Unoptimal intake and frequent illness 2. Baby is not yet eating 3. Genetic 77. Others 88. Do not know 99. No answer	[]	BK10



**THE EXPERIENCE OF BREASTFEEDING PROBLEMS
DURING THE FIRST SIX MONTHS PERIOD AMONG MOTHER
HAVING INFANTS AGED 6-12 MONTHS IN TWO SUB DISTRICT,
MAROS DISTRICT, SOUTH SULAWESI PROVINCES**



South East Asian Ministers of Education Organization (SEAMEO)
Regional Center for Food and Nutrition (RECFON) - Universitas Indonesia (UI)
Jl. Salemba Raya 6 Jakarta Pusat
Telp. : (021) 31930205, Fax : (021) 3936933

INTERVIEW GUIDELINES FOR HEALTH STAFF

Note: "(Greetings) I am (your name) research team from SEAMEO RECFON-University of Indonesia. We were here in the context of survey regarding the experience of breastfeeding problem among mother during the exclusive period in Maros District. This survey has obtained permission from Maros District authority. Incidentally you are randomly selected to participate in our surveys, and interviews are part of our survey. We will be kept strictly confidential and will only be used for survey purposes.

Approval: Before I started the interview, I would like to apply for approval to you, with a sign or give your fingerprint on this form. In this interview, I will ask you some questions related to your experiences regarding the exclusive breastfeeding program. Your participation is VOLUNTARY, if you are objected, you can refuse to be interviewed, without any sanctions. University of Indonesia, SEAMEO RECFON ensured the confidentiality of information that mothers have to say. By signing or giving your fingerprint on this form, you are agreed to participate in this study. We will be pleased, If you have questions

(assignment/fingerprint) _____ (name) _____ (date) _____

We will appreciate for your participation

Date of Interview :/...../.....(dd/mm/yy)			Time of Interview:to.....		
Interviewer					
01. Manjilala	02.	03.	04.	05.	[] [] []

A. IDENTITY OF RESPONDENT		
1	Name	
2	Age	
3	Currently position	
4	Previously position	
5	Duration of current position	
6	The last education background	

A. EXCLUSIVE BREASTFEEDING PROGRAM

1. What is programs related to exclusive breastfeeding in your working area?
2. Location
 - a. Where is it?
 - b. Is the activities ever conducted in other place, besides on posyandu?, Where and why if not?
3. The target of the program
 - a. Who is the program target?
 - b. What is the consideration to choose the program target?
 - c. Who is decided the program target?
4. Program implementer
 - a. What department / section who responsible for the program?
 - b. Does it involve cross-program and / or cross-sectoral?
 - c. How the form of coordination?
 - d. Did you have constraints? (form of constraints and how did you cope)
5. Implementing of the program
 - a. What are the materials that convey to the target?
 - b. How to shape the presentation of the material, why choose that method?
 - c. What type your media Media did you used?
 - d. How many times did you transmit the information to target?
 - e. Is you got supervision from Health district? (Type of supervision)
 - f. How did you know, the information provided of you understood by mother or not (monitoring and evaluation)
6. Training officers
 - a. Are there technical guidelines of the program?
 - b. Did you ever join the exclusive breastfeeding training?
 - c. How many time?
 - d. Could be you tell me about type of materials?
 - e. Were there materials regarding how to overcome the breastfeeding problem?
 - f. Could be you tell me, what is you know regarding the breastfeeding problem?
 - g. According to you, is the training materials have benefit and aplicale to support your occupation? If not, why
7. Budget
 - a. Where did the budget of the exclusive breastfeeding program activities?
 - b. Is the budget adequate? If not, how strategies to overcome them?
8. Tools and materials
 - a. How did the procurement of media and other materials for the exclusive breatfeeding program?.
 - b. How is the distribution of tools and other materials? (Smooth or not)
 - c. Were the tools and other materials sufficient / appropriate to the target number?
 - d. Did you barriers in the procurement and distribution of tools and materials programs?
9. Schedule
 - a. Is there a schedule of activities?
 - b. Who is decide the schedule?

B. Breastfeeding counelor

10. Do you have breastfeeding counselor?
11. How many?
12. Could be you tell me, how the form of breastfeeding counselor activities?
 - a. Target
 - b. Type of activities
 - c. Frequency of activities
 - d. Place of activities
 - e. Monitoring & evaluation



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INTERVIEW GUIDELINES FOR LACTATION COUNSELOR

Note: "(Greetings) I am (your name) research team from SEAMEO RECFON-University of Indonesia. We were here in the context of survey regarding the experience of breastfeeding problem among mother during the exclusive period in Maros District. This survey has obtained permission from Maros District authority. Incidentally you are randomly selected to participate in our surveys, and interviews are part of our survey. We will be kept strictly confidential and will only be used for survey purposes.

Approval: Before I started the interview, I would like to apply for approval to you, with a sign or give your fingerprint on this form. In this interview, I will ask you some questions related to your experiences regarding the exclusive breastfeeding program. Your participation is VOLUNTARY, if you are objected, you can refuse to be interviewed, without any sanctions. University of Indonesia, SEAMEO RECFON ensured the confidentiality of information that mothers have to say. By signing or giving your fingerprint on this form, you are agreed to participate in this study. We will be pleased, If you have questions

(assignment/fingerprint) _____ (name) _____ (date) _____

We will appreciate for your participation

Tanggal wawancara:/...../.....(dd/mm/yy)		Waktu wawancara:sampai.....			
Pewawancara					
01. Manjilala	02.	03.	04.	05.	[] [] []

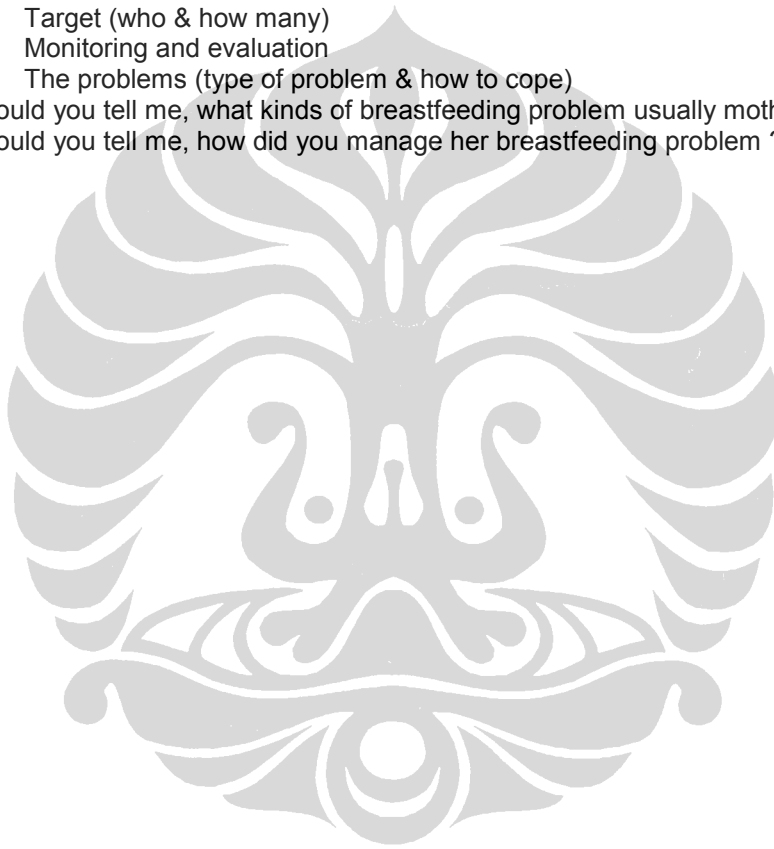
A. IDENTITAS RESPONDEN		
1	Name	
2	Age	
3	Currently position	
4	Previously position	
5	Duration of current position	
6	The last education background	

A. Training of lactation counselor

1. How many lactation counselor in your area?
2. When and where last you join the training of lactation counselor?
3. How long that training?
4. Could you tell to me, what kinds the material in the training?
5. Is there material regarding how to manage the breastfeeding problem?
6. Do you know breastfeeding problem?
 - a. Type of problem
 - b. How to manage the problem

B. Implementing of the counseling program

1. Could you tell me what is the activities have you done as you a lactation counselor? Bisakah ibu menceritakan kegiatan apa saja yang sudah ibu laksanakan sebagai konselor?
 - a. Type of activities
 - b. Frequency
 - c. Location
 - d. Target (who & how many)
 - e. Monitoring and evaluation
 - f. The problems (type of problem & how to cope)
2. Could you tell me, what kinds of breastfeeding problem usually mothers asking to you?
3. Could you tell me, how did you manage her breastfeeding problem ?





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DOCUMENT REVIEW & OBSERVATION

a. Date of observation:/...../.....(dd/mm/yy)		Time :to.....
b. Location :		
<ul style="list-style-type: none"> • • • 		
Observer		
36. Manjilala	02.	03.
	04.	05.
	[]	[]

No	Indicators	Result
1	The material of breastfeeding counseling	<ul style="list-style-type: none"> • Flipchart [] • Poster [] • Leaflet/Brochure [] • Demonstration tools [] • [] • []
2	The content of breastfeeding counseling material	<ul style="list-style-type: none"> • The benefit of EBF [] • Breastfeeding position [] • Breast treatment [] • Breastfeeding problem [] • [] • []
3	EBF program report	<ul style="list-style-type: none"> • Total target : • EBF : • Not EBF :
4	Counseling report	<ul style="list-style-type: none"> • Total target : • Coverage of program :
5	Program implementer	<ul style="list-style-type: none"> • Number of nutritionist : • Number of midwife : • Number of lactation counselor :

Frequencies GENERAL INFORMATION OF INFANT FEEDING

Where did you deliver?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	RS/PKM	53	25.9	25.9	25.9
	rumah bersalin milik bidan	121	59.0	59.0	84.9
	di rumah sendiri	31	15.1	15.1	100.0
	Total	205	100.0	100.0	

Do you still breastfeed?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ya	159	77.6	77.6	77.6
	tidak	46	22.4	22.4	100.0
	Total	205	100.0	100.0	

If not, when did you stop breastfeed? (Probe: age of child)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	11	5.4	23.9	23.9
	1	9	4.4	19.6	43.5
	2	5	2.4	10.9	54.3
	3	8	3.9	17.4	71.7
	4	2	1.0	4.3	76.1
	6	2	1.0	4.3	80.4
	7	3	1.5	6.5	87.0
	8	3	1.5	6.5	93.5
	9	1	.5	2.2	95.7
	10	1	.5	2.2	97.8
	12	1	.5	2.2	100.0
	Total	46	22.4	100.0	
Missing	System	159	77.6		
Total		205	100.0		

During aged 0-6 moths, did you give any food/drink?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ya	171	83.4	83.4	83.4
	tidak	34	16.6	16.6	100.0
	Total	205	100.0	100.0	

If yes, at what age?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	83	40.5	48.5
	1.00	20	9.8	60.2
	2.00	12	5.9	67.3
	3.00	13	6.3	74.9
	4.00	19	9.3	86.0
	5.00	21	10.2	98.2
	6.00	3	1.5	100.0
Total	171	83.4	100.0	
Missing System	34	16.6		
Total	205	100.0		

What type of food?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	34	16.6	16.6	16.6
air beras	1	.5	.5	17.1
air putih	14	6.8	6.8	23.9
air putih, biskuit	2	1.0	1.0	24.9
air putih, bubur SUN	1	.5	.5	25.4
air ramuan	1	.5	.5	25.9
air zam-zam, bubur, biskuit, air putih	1	.5	.5	26.3
biskuit	2	1.0	1.0	27.3
biskuit bayi	2	1.0	1.0	28.3
bubur bayi	2	1.0	1.0	29.3
bubur beras merah	1	.5	.5	29.8
bubur nasi	3	1.5	1.5	31.2
bubur saring	4	2.0	2.0	33.2
bubur SUN	8	3.9	3.9	37.1
bubur SUN, biskuit SUN	2	1.0	1.0	38.0
miskuit milna	1	.5	.5	38.5
pisang	4	2.0	2.0	40.5
susu formula	96	46.8	46.8	87.3
Susu Formula	3	1.5	1.5	88.8
susu formula dan bubur saring	1	.5	.5	89.3
susu formula, air putih	6	2.9	2.9	92.2
susu formula, biskuit	5	2.4	2.4	94.6
susu formula, biskuit, bubur	1	.5	.5	95.1
susu formula, bubur saring	1	.5	.5	95.6
susu formula, bubur SUN	3	1.5	1.5	97.1
susu formula, pisang	5	2.4	2.4	99.5
susu formula, biskuit dan bubur sun	1	.5	.5	100.0
Total	205	100.0	100.0	

Who is suggest you?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	1.0	1.2	1.2
suami	22	10.7	12.9	14.1
orang tua kandung/nenek si anak	94	45.9	55.3	69.4
tidak ada/ inisiatif ibu	47	22.9	27.6	97.1
tenaga kesehatan	4	2.0	2.4	99.4
keluarga	1	.5	.6	100.0
tetangga	170	82.9	100.0	
Total	35	17.1		
Missing System	205	100.0		
Total				

Chi-Square- Crosstabs

parity * sustain breastfeeding practices within 6 months

Crosstab

			sustain breastfeeding practices within 6 months		Total
			Mixed feeding	Breastfeeding	
parity	multiparous	Count	106	36	142
		% within sustain breastfeeding practices within 6 months	67.1%	76.6%	69.3%
	primiparous	Count	52	11	63
		% within sustain breastfeeding practices within 6 months	32.9%	23.4%	30.7%
Total		Count	158	47	205
		% within sustain breastfeeding practices within 6 months	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.538 ^b	1	.215		
Continuity Correction ^a	1.124	1	.289		
Likelihood Ratio	1.596	1	.206		
Fisher's Exact Test				.280	.144
Linear-by-Linear Association	1.531	1	.216		
N of Valid Cases	205				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 14.44.

Did you ever get breastfeeding counseling? * sustain breastfeeding practices within 6 months

Crosstab

			sustain breastfeeding practices within 6 months		Total
			Mixed feeding	Breastfeeding	
Did you ever get breastfeeding counseling?	tidak	Count % within sustain breastfeeding practices within 6 months	117 74.1%	32 68.1%	149 72.7%
	ya	Count % within sustain breastfeeding practices within 6 months	41 25.9%	15 31.9%	56 27.3%
Total		Count % within sustain breastfeeding practices within 6 months	158 100.0%	47 100.0%	205 100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.649 ^b	1	.420	.458	.265
Continuity Correction ^a	.384	1	.536		
Likelihood Ratio	.635	1	.426		
Fisher's Exact Test					
Linear-by-Linear Association	.646	1	.422		
N of Valid Cases	205				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 12.84.

Number of breastfeeding problems * sustain breastfeeding practices within 6 months

Crosstab

			sustain breastfeeding practices within 6 months		Total
			Mixed feeding	Breastfeeding	
Number of breastfeeding problems	>2 problem	Count	143	38	181
		% within sustain breastfeeding practices within 6 months	90.5%	80.9%	88.3%
	2 problem	Count	15	9	24
		% within sustain breastfeeding practices within 6 months	9.5%	19.1%	11.7%
Total		Count	158	47	205
		% within sustain breastfeeding practices within 6 months	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.267 ^b	1	.071	.117	.065
Continuity Correction ^a	2.400	1	.121		
Likelihood Ratio	2.959	1	.085		
Fisher's Exact Test				.117	.065
Linear-by-Linear Association	3.251	1	.071		
N of Valid Cases	205				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.50.

Breastfeeding knowledge * sustain breastfeeding practices within 6 months

Breastfeeding Knowledge * sustain breastfeeding practices within 6 months Crosstabulation

			sustain breastfeeding practices within 6 months		Total
			Mixed feeding	Breastfeeding	
Breastfeeding Knowledge	Poor	Count	30	3	33
		% within sustain breastfeeding practices within 6 months	19.0%	6.4%	16.1%
	Good	Count	128	44	172
		% within sustain breastfeeding practices within 6 months	81.0%	93.6%	83.9%
Total		Count	158	47	205
		% within sustain breastfeeding practices within 6 months	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4.261 ^b	1	.039		
Continuity Correction ^a	3.379	1	.066		
Likelihood Ratio	5.025	1	.025		
Fisher's Exact Test				.042	.027
Linear-by-Linear Association	4.240	1	.039		
N of Valid Cases	205				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.57.

Breastfeeding Knowledge

The proportion of correct answers from question of breastfeeding knowledge

Type of questions	Questions number	Questions	The proportion of correct answers n (%) ¹
Breastfeeding duration	1	According to you, Until what age an infant should be breastfeed?	126 (61.5)
	2	According to you, Until what age an infant should be given only breast milk?	179 (87.3)
	3	According to you, How frequent baby should be breastfeed?	196 (95.6)
	4	According to you, at what age the baby should be introduced to complementary food?	156 (76.1)
Breastfeeding problems	5	According to you, What influence the breast milk production?	53 (25.9)
	6	According to you, How breastfeeding practice if mother has any breastfeeding problems?	144 (70.2)
	7	According to you, What causes breast engorgement?	158 (77.1)
	8	According to you, What causes sore nipple?	43 (21.0)
	9	According to you, What causes breast refusal by the baby?	72 (35.1)
	10	According to you, What causes insufficient infant weight gain during breastfeeding period?	171 (83.4)

¹n=205

Frequency Table Breastfeeding Knowledge

Breastfeeding knowledge (Duration)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Poor	47	22.9	22.9	22.9
	Good	158	77.1	77.1	100.0
	Total	205	100.0	100.0	

Breastfeeding Knowledge (Problems)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Poor	128	62.4	62.4	62.4
	Good	77	37.6	37.6	100.0
	Total	205	100.0	100.0	

Crosstabs

Breastfeeding Knowledge (Duration) * sustain breastfeeding practices within 6 months

Crosstab

			sustain breastfeeding practices within 6 months		Total
			Mixed feeding	Breastfeeding	
Breastfeeding Knowledge (Duration)	low	Count % within sustain breastfeeding practices within 6 months	40 25.3%	7 14.9%	47 22.9%
	good	Count % within sustain breastfeeding practices within 6 months	118 74.7%	40 85.1%	158 77.1%
Total		Count % within sustain breastfeeding practices within 6 months	158 100.0%	47 100.0%	205 100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2.227 ^b	1	.136		
Continuity Correction ^a	1.676	1	.195		
Likelihood Ratio	2.391	1	.122		
Fisher's Exact Test				.168	.095
Linear-by-Linear Association	2.216	1	.137		
N of Valid Cases	205				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.78.

Breastfeeding Knowledge (Problems) * sustain breastfeeding practices within 6 months

Crosstab

			sustain breastfeeding practices within 6 months		Total
			Mixed feeding	Breastfeeding	
Breastfeeding Knowledge (Problems)	low	Count	141	36	177
		% within sustain breastfeeding practices within 6 months	89.2%	76.6%	86.3%
	good	Count	17	11	28
		% within sustain breastfeeding practices within 6 months	10.8%	23.4%	13.7%
Total		Count	158	47	205
		% within sustain breastfeeding practices within 6 months	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asy mp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4.911 ^b	1	.027		
Continuity Correction ^a	3.898	1	.048		
Likelihood Ratio	4.426	1	.035		
Fisher's Exact Test				.050	.028
Linear-by-Linear Association	4.887	1	.027		
N of Valid Cases	205				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.42.

Reliability of Breastfeeding Knowledge

Case Processing Summary

		N	%
Cases	Valid	205	100.0
	Excluded ^a	0	.0
	Total	205	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.476	.392	10

Item Statistics

	Mean	Std. Deviation	N
Knowledge the age a infant should be breastf eed	3.3805	8.44310	205
Knowledge the age a infant should be give only breast milk	1.1512	.42190	205
Knowledge the frequent baby should be breastf eed	1.0439	.20538	205
Knowledge the age baby should be introduced to complementary food	1.8195	.45548	205
Knowledge influencing the breast milk production	18.2146	33.37727	205
Knowledge the breastf eeding practice if mother has any breatf eeding problems	1.3024	.47096	205
Knowledge causing of breast engorgement	13.4244	30.34863	205
Knowledge causing of sore nipple	11.2488	26.00493	205
Knowledge causing of breast refusal by the baby	7.6634	21.20879	205
Knowledge causing of insufficient infant weight gain during breastfeeding period	5.8537	19.61612	205

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	6.510	1.044	18.215	17.171	17.449	36.281	10
Inter-Item Correlations	.060	-.197	.395	.592	-2.008	.018	10

The covariance matrix is calculated and used in the analysis.

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Knowledge the age a infant should be breastfeed	61.7220	6135.153	.091	.045	.475
Knowledge the age a infant should be give only breast milk	63.9512	6298.400	.415	.230	.479
Knowledge the frequent baby should be breastfeed	64.0585	6328.908	-.078	.064	.482
Knowledge the age baby should be introduced to complementary food	63.2829	6337.822	-.161	.092	.483
Knowledge influencing the breast milk production	46.8878	3875.992	.322	.212	.398
Knowledge the breastfeeding practice if mother has any breastfeeding problems	63.8000	6315.720	.140	.054	.481
Knowledge causing of breast engorgement	51.6780	3869.494	.407	.244	.341
Knowledge causing of sore nipple	53.8537	4443.567	.348	.176	.380
Knowledge causing of breast refusal by the baby	57.4390	5379.277	.160	.047	.462
Knowledge causing of insufficient infant weight gain during breastfeeding period	59.2488	5244.639	.245	.113	.431

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
65.1024	6326.387	79.53859	10

Frequency Table Number of Breastfeeding Problems

Number of breastfeeding problems

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	>2 problem	181	88.3	88.3	88.3
	2 problem	24	11.7	11.7	100.0
	Total	205	100.0	100.0	

Number of breastfeeding problems

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	>1 problem	193	94.1	94.1	94.1
	1 problem	12	5.9	5.9	100.0
	Total	205	100.0	100.0	

number of problems (0-1 mo)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 problem	49	23.9	24.9	24.9
	>1 problems	148	72.2	75.1	100.0
	Total	197	96.1	100.0	
Missing	System	8	3.9		
Total		205	100.0		

number of problems (1-3 mo)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 problem	65	31.7	39.2	39.2
	>1 problems	101	49.3	60.8	100.0
	Total	166	81.0	100.0	
Missing	System	39	19.0		
Total		205	100.0		

number of problems (3-6 mo)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 problem	66	32.2	40.5	40.5
	>1 problems	97	47.3	59.5	100.0
	Total	163	79.5	100.0	
Missing	System	42	20.5		
Total		205	100.0		

Frequency Table Sustained Breastfeeding Practices

sustain breastfeeding practices (0-1 mo)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Mixed feeding	118	57.6	59.9	59.9
	Breastfeeding	79	38.5	40.1	100.0
	Total	197	96.1	100.0	
Missing	System	8	3.9		
Total		205	100.0		

sustain breastfeeding practices (1-3 mo)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Mixed feeding	67	32.7	40.4	40.4
	Breastfeeding	99	48.3	59.6	100.0
	Total	166	81.0	100.0	
Missing	System	39	19.0		
Total		205	100.0		

sustain breastfeeding practices (3-6 mo)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Mixed feeding	91	44.4	55.8	55.8
	Breastfeeding	72	35.1	44.2	100.0
	Total	163	79.5	100.0	
Missing	System	42	20.5		
Total		205	100.0		

sustain breastfeeding practices within 6 months

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Mixed feeding	158	77.1	77.1	77.1
	Breastfeeding	47	22.9	22.9	100.0
	Total	205	100.0	100.0	

Crosstabs

Coping Mechanism and Sustain Breastfeeding Practices Aged 0-1 months

LOOK FOR ASSISTANCE (0-1 MO) * sustain breastfeeding practices (0-1 mo) Crosstabulation

			sustain breastfeeding practices (0-1 mo)		Total
			Mixed f eeding	Breastf eeding	
LOOK FOR ASSISTANCE (0-1 MO)	NO	Count % within LOOK FOR ASSISTANCE (0-1 MO)	9 30.0%	21 70.0%	30 100.0%
	YES	Count % within LOOK FOR ASSISTANCE (0-1 MO)	109 65.3%	58 34.7%	167 100.0%
Total		Count % within LOOK FOR ASSISTANCE (0-1 MO)	118 59.9%	79 40.1%	197 100.0%

SELF TREATMENT (0-1 MO) * sustain breastfeeding practices (0-1 mo) Crosstabulation

			sustain breastfeeding practices (0-1 mo)		Total
			Mixed f eeding	Breastf eeding	
SELF TREATMENT (0-1 MO)	NO	Count % within SELF TREATMENT (0-1 MO)	52 54.7%	43 45.3%	95 100.0%
	YES	Count % within SELF TREATMENT (0-1 MO)	66 64.7%	36 35.3%	102 100.0%
Total		Count % within SELF TREATMENT (0-1 MO)	118 59.9%	79 40.1%	197 100.0%

NOT DO ANYTHING (0-1 MO) * sustain breastfeeding practices (0-1 mo) Crosstabulation

			sustain breastf eeding practices (0-1 mo)		Total
			Mixed feeding	Breastfeeding	
NOT DO ANYTHING (0-1 MO)	NO	Count % within NOT DO ANYTHING (0-1 MO)	92 61.3%	58 38.7%	150 100.0%
	YES	Count % within NOT DO ANYTHING (0-1 MO)	26 55.3%	21 44.7%	47 100.0%
Total		Count % within NOT DO ANYTHING (0-1 MO)	118 59.9%	79 40.1%	197 100.0%

Crosstabs

Coping Mechanism and Sustain Breastfeeding Practices Aged 1-3 months

LOOK FOR ASSISTANCE (1-3 MO) * sustain breastfeeding practices (1-3 mo) Crosstabulation

			sustain breastfeeding practices (1-3 mo)		Total
			Mixed feeding	Breastfeeding	
LOOK FOR ASSISTANCE (1-3 MO)	NO	Count % within LOOK FOR ASSISTANCE (1-3 MO)	13 54.2%	11 45.8%	24 100.0%
	YES	Count % within LOOK FOR ASSISTANCE (1-3 MO)	54 38.0%	88 62.0%	142 100.0%
Total		Count % within LOOK FOR ASSISTANCE (1-3 MO)	67 40.4%	99 59.6%	166 100.0%

SELF TREATMENT (1-3 MO) * sustain breastfeeding practices (1-3 mo) Crosstabulation

			sustain breastfeeding practices (1-3 mo)		Total
			Mixed feeding	Breastfeeding	
SELF TREATMENT (1-3 MO)	NO	Count % within SELF TREATMENT (1-3 MO)	30 33.3%	60 66.7%	90 100.0%
	YES	Count % within SELF TREATMENT (1-3 MO)	37 48.7%	39 51.3%	76 100.0%
Total		Count % within SELF TREATMENT (1-3 MO)	67 40.4%	99 59.6%	166 100.0%

NOT DO ANYTHING (1-3 MO) * sustain breastfeeding practices (1-3 mo) Crosstabulation

			sustain breastfeeding practices (1-3 mo)		Total
			Mixed feeding	Breastfeeding	
NOT DO ANYTHING (1-3 MO)	NO	Count % within NOT DO ANYTHING (1-3 MO)	64 39.8%	97 60.2%	161 100.0%
	YES	Count % within NOT DO ANYTHING (1-3 MO)	3 60.0%	2 40.0%	5 100.0%
Total		Count % within NOT DO ANYTHING (1-3 MO)	67 40.4%	99 59.6%	166 100.0%

Crosstabs Coping Mechanism and Sustain Breastfeeding Practices Aged 3-6 months

LOOK FOR ASSISTANCE (3-6 MO) * sustain breastfeeding practices (3-6 mo) Crosstabulation

			sustain breastfeeding practices (3-6 mo)		Total
			Mixed feeding	Breastfeeding	
LOOK FOR ASSISTANCE (3-6 MO)	NO	Count % within LOOK FOR ASSISTANCE (3-6 MO)	15 78.9%	4 21.1%	19 100.0%
	YES	Count % within LOOK FOR ASSISTANCE (3-6 MO)	76 52.8%	68 47.2%	144 100.0%
Total		Count % within LOOK FOR ASSISTANCE (3-6 MO)	91 55.8%	72 44.2%	163 100.0%

SELF TREATMENT (3-6 MO) * sustain breastfeeding practices (3-6 mo) Crosstabulation

			sustain breastfeeding practices (3-6 mo)		Total
			Mixed feeding	Breastfeeding	
SELF TREATMENT (3-6 MO)	NO	Count % within SELF TREATMENT (3-6 MO)	47 44.3%	59 55.7%	106 100.0%
	YES	Count % within SELF TREATMENT (3-6 MO)	44 77.2%	13 22.8%	57 100.0%
Total		Count % within SELF TREATMENT (3-6 MO)	91 55.8%	72 44.2%	163 100.0%

NOT DO ANYTHING (3-6 MO) * sustain breastfeeding practices (3-6 mo) Crosstabulation

			sustain breastfeeding practices (3-6 mo)		Total
			Mixed feeding	Breastfeeding	
NOT DO ANYTHING (3-6 MO)	NO	Count % within NOT DO ANYTHING (3-6 MO)	71 54.2%	60 45.8%	131 100.0%
	YES	Count % within NOT DO ANYTHING (3-6 MO)	20 62.5%	12 37.5%	32 100.0%
Total		Count % within NOT DO ANYTHING (3-6 MO)	91 55.8%	72 44.2%	163 100.0%

Crosstabs

Number of breastfeeding problems and nutritional status

Number of breastfeeding problems * Nutrition Status (W/H)

Crosstab

			Nutrition Status (W/H)		Total
			Wasting	Normal	
Number of breastfeeding problems	>1 problem	Count	11	179	190
		% within Nutrition Status (W/H)	91.7%	94.2%	94.1%
	1 problem	Count	1	11	12
		% within Nutrition Status (W/H)	8.3%	5.8%	5.9%
Total		Count	12	190	202
		% within Nutrition Status (W/H)	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asy mp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.131 ^b	1	.718		
Continuity Correction ^a	.000	1	1.000		
Likelihood Ratio	.118	1	.731		
Fisher's Exact Test				.531	.531
Linear-by-Linear Association	.130	1	.718		
N of Valid Cases	202				

a. Computed only for a 2x2 table

b. 1 cells (25.0%) have expected count less than 5. The minimum expected count is .71.

Number of breastfeeding problems * Nutrition Status (H/A)**Crosstab**

			Nutrition Status (H/A)		Total
			Stunting	Normal	
Number of breastfeeding problems	>1 problem	Count	56	134	190
		% within Nutrition Status (H/A)	87.5%	97.1%	94.1%
	1 problem	Count	8	4	12
		% within Nutrition Status (H/A)	12.5%	2.9%	5.9%
Total	Count	64	138	202	
	% within Nutrition Status (H/A)	100.0%	100.0%	100.0%	

Chi-Square Tests

	Value	df	Asy mp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	7.214 ^b	1	.007		
Continuity Correction ^a	5.598	1	.018		
Likelihood Ratio	6.596	1	.010		
Fisher's Exact Test				.020	.011
Linear-by-Linear Association	7.178	1	.007		
N of Valid Cases	202				

a. Computed only for a 2x2 table

b. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 3.80.

Number of breastfeeding problems * Nutrition Status (W/A)**Crosstab**

		Nutrition Status (W/A)		Total
		Underweight	Normal	
Number of breastfeeding problems	>1 problem	Count 35 97.2%	156 93.4%	191 94.1%
	1 problem	Count 1 2.8%	11 6.6%	12 5.9%
Total		Count 36 100.0%	167 100.0%	203 100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.773 ^b	1	.379		
Continuity Correction ^a	.239	1	.625		
Likelihood Ratio	.915	1	.339		
Fisher's Exact Test				.697	.337
Linear-by-Linear Association	.769	1	.381		
N of Valid Cases	203				

a. Computed only for a 2x2 table

b. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.13.

Frequencies

Type of suggestion from person who supported mothers when experienced breastfeeding problems

Type of suggestion 0-1 mo

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid bayi dibangunkan	15	7.3	7.3	7.3
bayi dijemur	7	3.4	3.4	10.7
beri air putih	3	1.5	1.5	12.1
beri air zam-zam	2	1.0	1.0	13.1
beri obat	1	.5	.5	13.6
beri susu formula	71	34.5	34.5	48.1
biarkan saja	1	.5	.5	48.5
ibu lebih sering mandi	17	8.3	8.3	56.8
ibu minum obat	1	.5	.5	57.3
istirahat	1	.5	.5	57.8
payudara dipompa	11	5.3	5.3	63.1
payudara dikompres	33	16.0	16.0	79.1
payudara dipijat	2	1.0	1.0	80.1
puting dioles dengan madu	3	1.5	1.5	81.6
tetap menyusui	38	18.4	18.4	100.0
Total	206	100.0	100.0	

Type of suggestions 1-3 mo

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid beri obat	6	9.1	9.1	9.1
beri susu formula/makanan lainnya	11	16.7	16.7	25.8
biarkan saja	3	4.5	4.5	30.3
ibu lebih sering mandi	1	1.5	1.5	31.8
ibu minum obat	3	4.5	4.5	36.4
payudara dipompa/dikompres/dipijat	12	18.2	18.2	54.5
tetap menyusui	10	15.2	15.2	69.7
ibu diminta makan yang banyak	20	30.3	30.3	100.0
Total	66	100.0	100.0	

Type of suggestions 3-6 mo

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid beri obat	11	19.0	19.0	19.0
beri susu formula/makanan lainnya	21	36.2	36.2	55.2
biarkan saja	2	3.4	3.4	58.6
ibu minum obat	3	5.2	5.2	63.8
payudara dipompa/dikompres/dipijat	9	15.5	15.5	79.3
tetap menyusui	3	5.2	5.2	84.5
ibu diminta makan yang banyak	9	15.5	15.5	100.0
Total	58	100.0	100.0	

CURRICULUM VITAE**PERSONAL INFORMATION**

- Name : Manjilala, SGz
- Date of Birth : October 9th, 1977
- Place of Birth : Maros
- Sex : Male
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- Address : Kompleks Dosen Jurusan Gizi Politeknik Kesehatan Makassar
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- Website : <http://manjilala.info>; <http://gizimu.com>
- Mobile : +6285255549979
- Marital Status : Merried

EDUCATIONAL BACKGROUND

- University : Faculty of Public Health, Hasanuddin University (2005-2008)
- Diploma/Academy : Akademi Gizi Depkes Makassar (1998-2001)
- Senior High School : SMU Perguruan Islam Kabupaten Maros (1995-1998)
- Junior High School : MTsN DDI Mangkoso Kabupaten Barru (1991-1995)
- Elementary School : MI. DDI Mangkoso Kabupaten Barru (1986-1991)

WORKING EXPERIENCES

- Freelance on Akademi Gizi Depkes Makassar (2001-2006)
- Civil servant on Jurusan Gizi Politeknik Kesehatan Makassar (2006 - until now)
- Editorial in Journal of food and Nutrition, Published by Jurusan Gizi Politeknik Kesehatan Makassar (2005-2010)
- Vice secretary of The PERSAGI in South Sulawesi (2010 until now)
- Funder of NGO Kajian Gizi

SEMINAR AND WORKSHOP

- One day workshop blogging and awarding HIV/AIDS blog in Jakarta, as participant, orgsnized by Vivaneews.com and AusAid (December, 2011)
- One day course in Jakarta, The challenge of breastfeeding, as participant, orgsnized by AIMI (December, 2011)
- One day seminar in Jakarta, breastfeeding week 2011, as participant, orgsnized by SEAMEO-RECFON UI (July, 2011)
- One day seminar in Jakarta, current roles and future challenges of nutrisionits, as participant, orgsnized by SEAMEO-RECFON UI (2011).
- One day Seminar and workshop in Jakarta, The Lactation counselor of Indonesia, as participant, orgsnized by SELASI, AIMI and The Ministry of Health (2011)