
The Effect of a Mentoring Nursing Mothers Education on Cadres Knowledge of Oxytocin Massage and Exclusive Breastfeeding: an Intervention Study among Cadres in Sumowono PHC Area, Semarang District, Central Java, Indonesia

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ABSTRACT

Back Ground: Breastmilk in early life was an effective intervention in saving lives of newborns and could prevent deaths of children under five years old. Rate of breastfeed in world was lack. There were many breastmilk of mothers not sufficient. One effort to improve exclusive breastfeeding is oxytocin massage treatment and mentoring nursing mothers by cadres. Before doing the mentoring, cadres need to be trained on oxytocin massage treatment and exclusive breastfeeding.

Aim: This study conducted to evaluate the effect of a mentoring nursing mothers, education on cadres knowledge regarding oxytocin massage on breastmilk production and exclusive breastfeeding.

Study Design: This study utilized the simple pre-post test design. The intervention was short education for cadres about oxytocin massage and exclusive breastfeeding.

Samples: Twenty seven cadres participated in the study using convenience sampling and they were recruited from Sumowono PHC in Semarang District.

Place and Duration of Study: PHC Sumowono Region, Semarang District, between January to August 2016.

Results: It was found that 56,7 % of the participants were high school graduate and the average age was 50 y.o. The most important findings of the study were the following: a) cadres' knowledge was significantly improved after the course (paired-t test, exact $p < .05$), increase by 3.4 points.; b) low level of knowledge regarding oxytocin massage and exclusive breastfeeding in the pre-test phas.

Conclusion: This study proved that short mentoring nursing mothers course could improve cadres' knowledge regarding oxytocin massage and exclusive breast feeding. However, the sustainability of the change needs to be further investigated. The result can be used as the basic policy of lactation management and exclusive breastfeeding promotion education programs in the community.

INTRODUCTION

Breastmilk is a unique product given to human being by nature to fulfill all requirements of the offspring until it is mature enough to take adultfood. Its uniqueness lies inability of mother

to produce milk which will vary in quantity, quality, and consistency depending on age of baby, maturity and timing of feed. It has not been possible to achieve this with any other type of milk, even with state-of-the-art modifications using most advanced technology.

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Exclusive breastfeeding is one of the efforts to reduce infant mortality rate, less milk production becoming one of factors mother did not breastfeed exclusively (Shankar, 2015).

Breastmilk not only provides easily digestible and specifically needed amounts of nutrients, water, minerals, and vitamins but also several other benefits to both mother and baby. There are some benefits for baby such as (1) Reduces infections through “priming” of baby’s immune system, specifically diarrhoea due to E coli, rotavirus, Shigella, campylobacter etc, reduces incidence of respiratory tract infection, reduces late onset sepsis in low birth weight (LBW) babies, (2) Effect on better neurodevelopment and IQ, (3) Reduces risk of sudden infant death syndrome (4) Provides analgesia for baby during painful procedures, (5) Long-term diseases like type I diabetes mellitus, hypercholesterolaemia, hypertension, obesity and asthma have been found to be less in babies who were exclusively breastfed during first 6 months (Dieterich, Felice, O’Sullivan, & Rasmussen, 2013; F. R. Hauck, Thompson, Tanabe, Moon, & Vennemann, 2011; Horta, de Mola, & Victora, 2015; Ip et al., 2007; Joan L. Luby et al., 2016; Johnston, Landers, Noble, Szucs, & Viehmann, 2012; Stuebe, 2009; Yan, Liu, Zhu, Huang, & Wang, 2014).

On the other side, benefits for mother (1) Reduces postpartum bleeding, (2) Reduces menstrual blood loss, (3) Helps with child spacing attributable to lactational amenorrhea, (4) Reduces obesity, (5) Reduces risk of breast cancer and ovarian cancer, (6) Promotes bonding between mother and baby, (7) Reduces stress response, inflammation, and postpartum depression, (8) Convenience of feeding the baby on demand irrespective of time or place, (9) Economical (Sukhee Ahn et al., 2015).

Since 2001, WHO guidelines have stated that babies should be exclusively breastfed until

they are six months old – something most mothers and babies are physically able to do. In the crucial first few months, breastfed children are six times more likely to survive than children who are not breastfed. Yet globally only 36% of infants younger than six months are exclusively breastfed, and in developing countries poor feeding practices – including lack of exclusive breastfeeding until six months and failure to initiate breastfeeding in first hour – contribute to the deaths of 800.000 children under five years of age each year (Shetty, Priya, 2014).

Coverage of exclusive breastfeeding was targeted by Ministry of Health RI to reach 80%. The target is very difficult to achieve. Studies showed that exclusive breastfeeding rate in Indonesia are very low. The Indonesian Demographic and Health Survey had collected data on infant feeding practice for each of the children born in five years preceding the survey. A great majority of children ever had breastfeeding (96-97%), and more than half started within first day. The median duration of breastfeeding was estimated at 23.9 months. Among infants under 4 months, 53% were exclusively breastfed, and the median duration of exclusive breastfeeding was 1.7 months (Fikawati & Syafiq, 2009).

Based on District Health Office Semarang, exclusive breastfeeding showed in 2011 is 45,09 % which is there are increased number 7,83 % than in 2010 which is 37,26 %, but in fact six months year old babies are not given exclusively breastfed (Astika, 2012). On 2012 there are increasing number 51,7 %, still yet far than governments hope which is 80% babies get exclusive breastfeeding. One of the district that are low exclusively breastfed is Semarang District, which is 37,7% (MOH, 2014).

Oxytocin massage one of treatment help postpartum mothers to improve breastmilk

production with early intervention by stimulating oxytocin hormone. Massage therapy of spine in costa 5-6 to scapula would accelerate work on parasympathetic nervous system stimulates posterior pituitary to secrete oxytocin.

Oxytocin massage as lactation management is one thing that needed to support successful breastfeeding so baby can be fed properly. The goal of management is to increase the use of exclusive breastfeeding until the baby is 6 months old, with affection facilities. Lactation management begins during pregnancy (antenatal), immediately after birth (prenatal) and the postpartum period (post-natal).

Breastmilk in early life was an effective intervention in saving lives of newborns and could prevent 13-15% of 9 million deaths of children under five years old. Rate of breastfeed in world was lack, between 20-40%. There were many breastmilk of postpartum mothers not sufficient at one week postpartum and breastfeed blockage incident that required mothers breastcare each month. One effort to improve breastmilk production with early intervention in postpartum mothers by stimulating oxytocin hormone. Efforts to facilitate breastfeeding can be done by massage oxytocin (Resty, 2014). Multiprofessional team must support and encourage exclusive breast feeding in almost all patients, and motivate mother to keep breast feeding for at least 6 months (F. Teixeira et al., 2015). In Indonesia, research last year by Aristiati Susiloretni, from the Semarang Health Polytechnic, and colleagues suggests that if the government were to invest in a robust implementation plan of its new legislation, it might see a radical shift in breastfeeding rates. They found that a holistic approach – one that involved voluntary health workers, traditional birth attendants, Muslim scholars and heads of villages and used advocacy, training, media pro-motion and home visits – increased breastfeeding enormously (Shetty, Priya, 2014).

During this past few years, exclusive breastfeeding failure because of lack knowledge of mothers, mothers education, also her awareness the importance of giving breastfeeding; however it can be intervened by giving cadres mentoring nursing mothers about oxytocin massage and exclusive breastfeeding. Mentoring that should be done need training about cadres mentoring which contain counseling on giving oxytocin massage and exclusive breastfeeding. Breastfeeding support group can involve cadre by increasing knowledge, skills and training (Jumiyati, 2014). In most of the maternity care hospitals and Pubic Health Centre's, a lactation management centre exists to help mothers with breast feeding problems and to promote, protect and support breast feeding (Jumiyati, 2014). This is proved that the mentoring nursing mothers by cadres is needed. Before doing the mentoring, cadres need to be trained on exclusive breastfeeding and lactation management. The aim in this study conducted to evaluate the effect of a mentoring nursing mothers education on cadres knowledge regarding oxytocin massage and exclusive breastfeeding in Sumowono PHC Semarang District, East Jawa, Indonesia.

METHODS

Design

This research is quation experiment with non randomized pre-test – post test design one group only. Means that pre-test is before any treatment to know cadres knowledge about oxytocin massage and exclusive breastfeeding. Then, there are treatments for cadres which is mentoring. Post test to know cadres knowledge about oxytocin massage and exclusive breastfeeding after the mentoring has conducted.

Samples

It was conducted in Sumowono Public Health Centre, with the criterias (1) Not yet

conducted mentoring by cadres or any health profession in speciality mother and her baby mentoring about oxytocin massage and exclusive breastfeeding, (2) Health counselor breastfed is newly recruited in public health center and there are no support groups for breastfeeding. Twenty seven cadres participated in the study using convenience sampling and purposive sampling as the technique with inclusion criteria such as (1) Cadres from Sumowono PHC in Semarang District, (2) Has been educated elementary school in minimum, (3) Included in two chosen cadres that represent posyandu.

Instrument

Closed-questionnaire needs to measure cadres knowledge related with oxytocin massage and exclusive breastfeeding which is filled with his own cadres and book about how to trained cadres in mentoring related with exclusive breastfeeding that are used as a list-to-do when questionnaire made.

Data analysis

Paired t-tests were used to compare data before and after mentoring trained. The measurement are differences of knowledge before and after mentoring on each groups are normal distribution. On how hypotesis concluded thus are used with comparing p value (probability) with α value on confidence interval 95% ($\alpha = 0,05$). Zero hypotesis (H_0) denied or alternative hypothesis (H_a) accepted if p value smaller than α value ($p < 0,05$).

RESULTS

Cadres knowledge before mentoring nursing mothers education

Mean total score cadres knowledge before mentoring nursing mothers education is 9,96 with 5,488 standard deviations. Minimal

score is 0 and maximal score is 18, yet still all answers are wrong and there is no cadres has answered all correct. Total distribution score before can be seen in tables 2. Some of cadres with right answer or less or equal 50 % of question are 55,6 % or more than 50 % cadres has not yet well-knowned about oxytocin massage and exclusive breastfeeding.

Cadres knowledge after mentoring nursing mothers education

Mean total score cadres knowledge after mentoring nursing mother education is 13,3 with 3,94 standard deviation. Minimal score is 0 and maximal score is 18, yet still all answers are wrong and there is no cadres has answered all correct.

Total distribution score after mentoring nursing mother education can be seen in tables 4. Some of cadres with right answer or less or equal 50 % of question are 70,8% or more than 50 % cadres has well-knowned about oxytocin massage and exclusive breastfeeding.

Diagram 1 of cadres knowledge before mentoring nursing mothers education

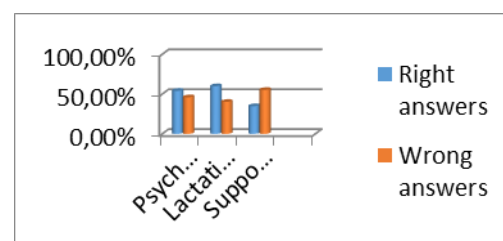


Table 1. Distribution score of cadres

Variables	Number		Percentage	
	R**	W**	R**	W**
Psychology*				
Confidence	21	6	77.8	22.2
Anxiety	3	24	11,1	88.9
Hurt	4	23	14,8	85.2
Baby loving	23	4	85,2	14.8
Husband support	22	5	81,5	18.5
Oxytocin massage*				
Increased breastfeeding production	20	7	74.1	25.9
Right position of breastfeeding	12	15	44.4	55.6
Prevent scuffed nipple	18	9	66.7	33.3
Duration giving breastfeeding	21	6	77.8	22.2
Definition of bonding	14	13	51.9	48.1
Right attachment	14	13	51.9	48.1
Successfull breastfeeding	14	13	51.9	48.1
Knowledge that support breastfeeding*				
Burping baby	7	20	25.9	74.1
Breast massage techniques	12	15	44.4	55.6
Breastfed storage	13	14	58.1	51.9
Breastfed durability in the refrigerator	9	18	33.3	66.7
Breastfed durability in the separate freezer	11	16	40.7	59.3
Breastfed durability in the freezer	7	20	25.9	74.1
Breastfed durability in the room temperature	11	16	40.7	59.3
Type of milker	12	15	44.4	55.6

*Totals 27 cadres

** R = Number of cadres who are right

** W = Number of cadres who are wrong

Tables of total score cadres knowledge before mentoring nursing mothers education

Cadres knowledge about oxytocin massage and exclusive breastfeeding	n	%
Has right answers less than or equal 50 %	15	55,6
Has right answers more than 50 %	12	44,4
Total	27	100

Table 3. Distribution score of cadres

Variables	Number		Percentage	
	R**	W**	R**	W**
Psychology*				
Confidence	26	1	96.3	3.7
Anxiety	5	22	18.5	81.5
Hurt	5	22	18.5	81.5
Baby loving	25	2	92.6	7.4
Husband support	26	1	96.3	3.7
Oxytocin massage*				
Increased breastfeeding production	24	3	88.9	11.1
Right position of breastfeeding	14	13	51.9	48.1
Prevent scuffed nipple	24	3	88.9	11.1
Duration giving breastfeeding	26	3	96.3	3.7
Definition of bonding	22	5	81.5	18.5
Right attachment	24	3	88.9	11.1
Successfull breastfeeding	21	6	77.8	22.2
Knowledge that support breastfeeding*				
Burping baby	17	10	63.0	37.0
Breast massage techniques	15	12	44.4	55.6
Breastfed storage	18	9	66.7	33.3
Breastfed durability in the refrigerator	6	21	22.2	77.8
Breastfed durability in the separate freezer	20	7	74.1	25.9

Breastfed durability in the freezer	9	18	33.3	66.7
Breastfed durability in the room temperature	15	12	55.6	44.4
Type of milker	21	6	22.2	77.8

*Totals 27 cadres

** R = Number of cadres who are right

** W = Number of cadres who are wrong

Tables 4. Total score of knowledge after mentoring

Cadres knowledge about oxytocin massage and exclusive breastfeeding	n	%
Has right answers less than or equal 50 %	6	22,2
Has right answers more than 50 %	21	70,8
Total	27	100

DISCUSSION

From normality test showed that two variables has normal distribution (pre $p=0,851$ and post $p=0,694$), so it can be parametric test. From difference paired t test showed that there is significance differences beetwen cadres knowledge before and after mentoring ($p= 0,08$). The differences especially on knowledge about mothers confidence.

The cadres are the first to help somebody, to get to the person first so they need training. In the future, it would be good to go to every posyandu and for it to be like a Public Health Center. (Child Fund, 2015).

Before treatment midwife give health education about lactation, exclusive breastfeeding, mother's confidence related to coming out breastmilk at least, baby loving, husband support, how to increase breastmilk, how to prevent from scuffed nipple, duration of exclusive breastfeeding, bonding definition, attachment breastfeeding, success effort of breastfeeding, oxytocin massage techniques, breastmilk storage, breastfed durability in the refrigerator, breastfed durability in separate freezer and not separated freezer, room temperature and type of milker.

Steps of oxytocin massage, open clothes, wear a towel, pour hands with baby oil, massage of spine in costa 5-6 to scapula 2-3 minutes, wipe mother's back with towel (warm water-cold water alternately). Before mentoring most of cadres knowledge is well about mother's confidence related to come out breastmilk at least, baby loving, husband support, how to increased breastmilk, how to

prevent from scuffed nipple, duration of exclusive breastfeeding, bonding definition, attachment breastfeeding and success effort of breastfeeding. Before mentoring most of cadres has less of knowledge about mother's anxiety, mother's hurt influenced to breastmilk, how to breastfed in the right ways, how to burping baby, breast massage techniques, breastmilk storage, breastfed durability in the refrigerator, breastfed durability in separate freezer and not separated freezer, room temperature and type of milker.

After mentoring, most of cadres knowledge well about confidence related to come out breastmilk at least, baby loving, husband support, how to increased breastmilk, how to prevent from scuffed nipple, duration of exclusive breastfeeding, bonding definition, attachment breastfeeding, how to oxytocin massage techniques, how to burping baby, breastmilk storage, success effort of breastfeeding breastfed durability in the refrigerator, breastfed durability in separate freezer and not separated freezer, room temperature and type of milker. After mentoring, most of cadres knowledge well about confidence related to come out breastmilk at least, how to prevent from scuffed nipple, breast massage techniques, breastfed durability in separate freezer and not separated freezer.

There is significance differences beetwen total score cadres knowledge on oxytocin massage before and after mentoring nursing mother education ($p<0,05$) with enhancement as big as 3,4 point. There is also significance differences ($p<0,05$) on cadres knowledge about

breastmilk such as : confidence related to come out breastmilk at least, bonding definition, attachment breastfeeding, how to burping baby, breastmilk storage, success effort of breastfeeding, breastfed durability in separate freezer and not separated freezer and type of milker.

In general, there are few things that are less on cadres knowledge about breastmilk (>10% cadres not yet known) such as : confidence related to come out breastmilk at least, how to increased breastmilk, how to oxytocin massage, how to prevent from scuffed nipple, how to breastfed in the right ways, bonding definition, attachment breastfeeding, how to burping baby, breastmilk storage, three things in successfull breastfeeding, breastfed durability in the refrigerator, breastfed durability in separate freezer and not separated freezer, room temperature and type of milker.

CONCLUSION

This study proved that short mentoring nursing mothers course could improve cadres' knowledge regarding oxytocin massage and exclusive breast feeding. However, the sustainability of the change needs to be further investigated. The result can be used as the basic policy of lactation management and exclusive breastfeeding promotion education programs in the community

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