

SOCIAL SUPPORT TYPE FOR MOTHERS IN CHOOSING KANGAROO MOTHER CARE

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ABSTRACT

Background. Kangaroo Mother Care (KMC) is a treatment method of low birth weight (LBW) infants, which has proved to be more provitable compared with other conventional treatments in maintaining temperature stability and survival of LBW infants. Physical exhaustion after delivery, mother's concern for the condition of a small newborn, and social support are factors that influence maternal care in choosing the method of LBW care.

Objective. The aim of this study was to analyze the relationship of perceived social support type by mothers of LBW infants including tangible support, and emotional support by the choosing of KMC.

Methods. This was a cross-sectional design. The subjects were 52 postpartum mothers of LBW infants who delivered at Dr. Cipto Mangunkusuko Hospital Jakarta, from April to June 2011 by using consecutive sampling. Data analysis using chi-square or Fisher's exact test, multiple logistic regression.

Result. A significant relationship was found between the social support type, including tangible support type ($p < 0.001$, RP 3.22, 95% CI: 1.22-8.51), informational support ($p < 0.001$, PR 4.00, 95% CI: 1.48-10.48), and emotional support ($p = 0.002$, PR 3.36, 95% CI: 1.01-11.25) with choosing KMC. Informational support was the factor that influences the choosing of KMC (PR 35.39, 95% CI: 5.15-243.22).

Conclusion. The social support type has a significant relationship with the choosing of KMC and informational support is the factor that influences the choosing of KMC. It is needed to improve information and education for mothers since getting pregnant through prenatal education programs by health care provider to prepare the kangaroo mother care in LBW infants.

Key words: emotional support, informational support, kangaroo mother care, perceived social support, tangible support.

Introduction.

A low birth weight infant (< 2500 grams) is one of the risk factors in contributing infant death, especially during perinatal period caused by hypothermia. More than 20 million infants were born with low birth weight, and it is similar with 15.5% of all born babies, 95% of which are born in developing countries¹⁻³.

The latest analysis revealed that about 3 million neonatal deaths per year could be prevented by using chief and 'effective' interventions, one of which is Kangaroo Mother Care (KMC)³.

A support is an important component in using KMC. Mothers need this kind of support to raise their self evidence in managing LBW infants, including the process and effectiveness of KMC. The support can be from the health personels, husband, and oyer person in the family. It will be difficult for mothers to do/use this KMC successfully without their supports^{4,5}.

Social support is an important component in making intervention against health behavior and might be a promising technique in promoting changes of health behaviors. Some of the social support might have good effect for the mothers (individuals) according to the type of support⁶. One of the support types might result in different effects, so it will be very helpful to find out the most needed social support in every situation.

The aim of this study was to analyze the association of social support of the mothers in choosing KMC.

Methods

The study was carried out on postpartum mothers of LBW infants delivered at Cipto Mangunkusumo Hospital from April 6 to June 18, 2011. They were already informed about the study and filled in the informed consents. The study got the recommended ethical research letter from the Ethical Committee of Research, Medical School Universitas Padjadjaran/Hasan Sadikin General Hospital Bandung, and also from the Director of Cipto Mangunkusumo General Hospital, Jakarta.

This was an analytic correlation cross sectional study with $Z_a=1.96$, $Z_b=0.84$, $r=0.4$, with consecutive sampling of 52 subjects including 10% additional samples in anticipating any missing data. Inclusion criteria was postpartum mother up to 3rd day and healthy and stable babies weighing 1,500-2,499 grams. Exclusion criteria was mother of LBW infants with congenital anomalies, mothers with disabilities or abnormalities in the area around the chest and there were complications during delivery.

On the first day of the study the subjects filled in the questionair about the characteristics, social support, visible type of support, information, and emotional support during the last three months. Then we observed the choosing of KMC from the first to third day. In case the baby got asphyxia or other emergency such as convulsions, hypoglycemia, hyperthermia, and mother was dismissed before the study, then they were grouped as 'drop-out'.

Based on the normal distribution criteria, the total score collected were divided into three categories, i.e. low if the total score $< X-1$ SD; mild if the total score $X-1SD < X+1SD$, and high if the total score $> X+1SD$.

We used adapted questionnaire of social support questionnaire satisfaction (SSQS) from Sarason et al, added with social support for the mothers during the last three months of pregnancy, delivery, and 24 hours postpartum. This questionnaire was previously tested about the validity using Spearman rank (> 0.3) and reliability using Alfa Cronbach (0.85).

Statistical analysis using computerized program. Chi square statistical test or exact Fisher test was used to find out the association of the type of social support for the mother and the choosing of KMC, and multivariable analysis (double logistic regression) was used to find out the most associated factor in choosing KMC.

Results

The total subject were 52 postpartum mothers who delivered LBW babies at Dr Cipto Mangunkusumo Hospital Jakarta. They fulfilled the inclusion criteria and agreed to be included in the study after given information. There was no drop-out of the subject.

Table 1 shows the characteristics of the subjects. Most of the subjects 34 (65%) were 20-35 years old, 28 (54%) with 10-12 years educational background, 25 (48%) parity I, and 36 (69%) with monthly economic income $> Rp. 1,290,000.-$.

Of the 52 subjects, 13 (25%) choosed to use KMC, and the rest 39 (75%) did not choose to use KMC.

Table 2 shows that most of the subject (73%) with high visible type of support choosed to use KMC, only 12% with mild/low visible type of support choose to use KMC. Even the statistical analysis revealed that there was a significant association of visible support on the mothers and the choosing of LMC. Using the exact Fisher test we got the value of $p<0.001$ with RP 3.22 (CI 95%; 1.22-8.51),

Seventy seven percent of the respondents with high informational support choosed to use LMC, only 8% of the low/mild informational support choosed KMC. Statistically it was also

found that there was a significant association between the type of support and the choosing of KMC with analytic value $p < 0.001$ and RP 4.00 (CI 95%: 1.48-10.84).

Most of the subjects with high emotional support (75%) also choosed the LMC, and only several with low-mild emotional support (16%) choosed the KMC. Statistical analysis revealed that there was a significant association between emotional support of the mother and the choosed of LMC ($p = 0.002$) and RP 3.36 (CI 95%: 1.01-11.25).

Visible type of support, informational support and emotional support with the value of $p < 0.25$ were variables that were included in multivariate selection. Multivariate analysis using double logistic regression with backward stepwise was done step by step to get the best model/type/result.

Table 3 shows that of the three variables, only informational and emotional supports that had the value of $p < 0.25$, the informational support had the highest RP value i.e. 35.39 (CI 95%: 5.15-243.22).

Table 1. Univariate analysis of the subject characteristics

Subject characteristics	Amount	%
Age (yr)		
<20	12	23
20–35	34	65
>35	6	12
Education (yr)		
≤ 6	1	2
7–9	20	38
10–12	28	54
>12	3	6
Parity		
1	25	48
2–3	22	42
>3	5	10
Economic status(/ month)		
<Rp1.290.000,-	16	31
≥Rp1.290.000,-	36	69

Table 2. Bivariate analysis of the association of social support of mothers and the choosing of KMC.

Type of social support	The choosing of KMC				P	RP (95% CI)
	No		Yes			
	N	%	n	%		
Visible support	36	88	5	12	<0,001	3,22 (1,22–8,51)
Low/mild	3	27	8	73		
High						
Informational support	36	92	3	8	<0,001	4,00 (1,48–10,84)
Low/mild	3	23	10	77		
High						
Emotional support	37	84	7	16	0,002	3,36 (1,01–11,25)
Low/mild	2	25	6	75		
High						

Table 3. The most effective multivariate analysis in choosing KMC.

Variabel	Koef B	SE (β)	Value p	RP (95% CI)
Informational support	3.566	0,983	0,000	35,39 (5,15–243,22)
Emotional support	2,544	1,211	0,036	12,73 (1,19–136,56)
Konstanta	- 9,057			

Accuration model=88,5%

DISCUSSION

Visible support.

Statistical analysis revealed that there was a significant association of the visible support of the mothers and KMC. Visible support might be in the form of direct aids such as financial or doing daily home works. It will be relevance in facing every situation that brings the mother to a stress condition.

All that were theoretically mentioned are similar with what the subjects faced. During the pregnancy period, any kind of help in daily home works will be very valuable for them⁸. After delivery, the mothers are in physical recovery condition. The mother might be in a long time fatigue that might cause depressive condition.

A study by Bello et al⁹ showed that social support during delivery period might result in early start of breast feeding ($p < 0.001$). This might become an assumption to choose KMC. The result of KMC will be more significant with direct participation and real support of the husband, grandmother, aunt and special person in the family in the place of the mother. Direct participation

of the husband and other person in the family should better be started since pregnancy that will result in mother's self confidence in caring her baby and her role as a mother.

Informational support,

Statistical analysis also showed that there is a significant association between informational support and the choosing of KMC. DiMatteo and Martin⁶ revealed that informational support might be in the form of advising alternative actions that might lessen the problems or in facing difficult situations. This advice might help the mother to face the problems in other ways and help her to minimize the effects.

Informations might become a special factor in promoting a health action. Accordingly, a study by Marcos and Cantero¹⁰ in Spain on patients with eating difficulty found out that a general information will be more received and significant in spite of emotional and practical/physical support. They also informed that it is not only giving information but accordingly followed by listening action and discussion.

A study by Melnyk et al¹¹ about the implementation of educational-behavioral intervention program (COPE) on two subject groups revealed that implementation of COPE since pregnancy period might decrease mother's worries and depression on postpartum and might increase good outcomes for the mother and preterm baby.

The informations that mothers need about the management of LBW infants using Kangaroo method including the process and availability of KMC will be very important that at the end makes the mother choose to use KMC. Everything about the KMC is better informed since the first antenatal care visit^{4,5}. Besides, printed informations, leaflet, and video, might help the mother to choose the management of LBW infants using KMC.

Our study on 52 subjects revealed that most of them (56%) did not know about the use of Kangaroo method since early pregnancy. They only know about KMC when they are in the hospital. The less optimal use of the information is seen through the number of mothers joining the pregnant mother class or who are seeking and reading about infants management since pregnancy.

Psychological change in mother during the taking in phase will have an influence in receiving information during the first 24 hours postnatal. In this phase worries and her new role as a mother will lessen her perception, so that the information must be given again and again^{12,13}. Mother's perception will be better if she had been informed about the KMC since pregnancy.

Emotional support

Statistical analysis also revealed that there was a significant association between emotional support on the mother and the choosing of KMC.

Physiologic and psychologic conditions will influenced the mother very much in responding the baby's birth. A baby in good condition is what a mother expected, but when the baby was born prematurely with a low birth weight, the mother will have difficulties to adapt in postpartum period and in managing the newborn baby.

A mother with fully support from the husband and family will be more able to face the emotional problems in caring the LBW infant. Strong and good support and participation will be of much help for the mother in adapting her role to care the LBW baby.

A study by Eisengart et al¹⁴ in America on mothers with LBW infants found out that there was a correlation between the mother's stress condition and the baby at risk, social support, and the ability to express her emotion. Social support has also an association in mother's defensive mechanism against external stressors to overcome her stress.

A study by Preide and Ardal¹⁵ in Ontario on mothers with preterm babies hospitalized in NICU with 'buddy' effectivity program i.e. emotional and informational support through parents education, was very helpful for the parents in decreasing worried and depression.

Many problems to face especially by mother with LBW baby, might result in stress, while a person in stressed condition or psychologic stress in her/his life need an individual strength or environmental support to decrease the stress. Support from the closest relatives will become defensive mechanism against external stressors for the mother in decreasing the stress¹⁴.

Sarafino et al¹⁶ found that emotional support included empathical expression, attention, encouragement, personal warmth, love and emotional help, with every form of activity might lead the individual to a condition that she/he is commended, honored, loved, and there is someone to give attention and good feelings. Many experts believe that emotional support is the most important kind of support on individual health.

This is in accordance with our subjects, that emotional support for the mother in postpartum with LBW infants makes the mother feel loved, honored, attented, that raise the self confidence and competence. This might be a special motivation for the mother to use the Kangaroo method as a mother in her role.

Through double logistic regression analysis, there are only two variables with $p < 0.01$ i.e. informational and emotional supports. The most dominantly variable that had an effect in choosing KMC is informational support with RP value 35.39 (CI 95%:5.15-243.22) that means mother with highly informational support will mostly choose the KMC 35.39 times more than those with only emotional support.

Informational support became the most influential in our study because the process in forming a behavior was started from the information to the subject, then the information will psychologically perceived, to choose or to throw unused information. When the stimulus given is in the form of informational support and the mother is willing to choose KMC, then the quality of informational support will be the main factor that influence the change of mother's behavior. When the mother had been informed about the Kangaroo method since pregnancy, then she will have better perception about it.

From the results of the study we concluded that the type of social support has a relation with the choosing of KMC and informational support is the mostly influencing factor in choosing KMC. So more information and education on mothers are needed through prenatal education since pregnancy to prepare a good management of LBW infants using KMC. We hope that furtherly, a cohort study might be done with more total samples, to find out the longterm outcome of the use of KMC.

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