Journal of Modern Education Review, ISSN 2155-7993, USA
September 2018, Volume 8, No. 9, pp. 667–672
Doi: 10.15341/jmer(2155-7993)/09.08.2018/004

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Saving Low Birth Weight Babies with Kangaroo Mother Care: Family Resilience and Social Capital as Success Factors

Ade Iva Murty
(Fakultas Psikologi Universitas Pancasila, Jakarta, Indonesia)

Abstract: The world has been facing problems of babies born with body weight less than 2500 grams (termed Low Birth Weight Baby = LBW). LBW babies commonly associated with neonatal mortality and higher probability of severe morbidity, especially in a country like Indonesia. Kangaroo Mother Care (KMC) is a powerful and easy to use method for preventing LBW babies' death. The study intended to identify psychological factors for the success of KMC treatment at home. Conducted in Qualitative Approach and case studies design, researcher spent months in observing and interviewing 2 families with LBW babies, treated with KMC in Karawang, an urban skirt of metropolitan Jakarta. The study shows that KMC relies heavily on family resilience; it is how the family adapts and bounces back through the time of crises having LBW babies. KMC at home motivates family to manage problem effectively and at the end saving the baby from neonatal death. The study also reveals, a family that has been succeeding in treatment of KMC, actually a family which has a strong social capital, with durable networks and participation of community. The study represents how a psychological framework can explain factors which usually avoided by health professionals, which contributes significantly for preventing neonates and LBW babies' death.

Key words: kangaroo mother care, family resilience, and social capital

1. Introduction

World Health Organization has identified that globally 20 million low birth weight (LBW) babies born every year. In Indonesia, LBW babies turn out to be the most crucial problem in neonatal, infants and child's health problem, that during the last 40 years, the problems remain stagnant and do not reflect a major shift in problems alleviation. A neonate is a baby within 0–28 days born and LBW babies described as neonates born with body weight under 2500 gram. In Indonesia, neonatal mortality rate also accounts for 19 deaths in 1000 babies born alive and within the last 10 years, LBW is the underlying cause of these deaths (Indonesia Health Profile, 2014). Indonesia for decades struggles with various problems of neonatal and infant morbidity. Government and many non-governmental organizations (NGO) are hand in hand to build programs for helping society achieve an increasing degree of general health.

The occurrences of LBW babies not only happen in preterm but also term birth. LBW babies are more likely to experience neonatal morbidities, such as acute respiratory, gastrointestinal, immunologic, central nervous

Ade Iva Murty, Dr., Psychology Faculty, Universitas Pancasila; research areas/interests: social psychology. E-mail: aiwicaksono@gmail.com.

system, hearing and vision problems compared to term and normal weight infants (Chan et al., 2016). And the problems of low birth weight influence baby's health in the long term. In Indonesia, the possibility of survival for LBW babies decrease within low-income economic contexts. Good quality care of LBW babies could reduce mortality risks, but the technologies are not the cheap ones, besides it needs skilled personnel, maintenance and logistic support. Surely the best treatment we can find at hospitals, especially hospitals at the province's capital or A-accredited hospitals.

Kangaroo Mother Care (KMC) was first introduced by Dr. Edgar Rey and his pediatrician colleagues from Colombia, in the late year of 1970s. It was developed first as a strategic way of compensating scarcity of facilities for treatment of LBW babies (for example baby warmers and incubators). KMC defined as early, prolonged, and continuous skin to skin contact with mother-father and other significant others of LBW babies, both in hospital and after discharge, until at least the 40th week of postnatal gestational (Cattaneo et al., 1998). KMC doesn't need sophisticated health equipment, LBW babies positioned in mother's chest and wrapped in warm cloths. LBW babies will stay there a whole day with interval 2 hours KMC and 1 hour put on bed or baby's box (see the picture below).

Picture 1 Example of KMC

KMC is an effective way for LBW babies to meet his or her needs of breastfeeding, warmth, protection from infection, safety and love. Charpak et al. (2005) conducted systematic meta-analysis of KMC practices for the last 10 years, has shown that KMC significantly increases body temperature of LBW babies by up to 1.0°C and also the uptake and duration of breastfeeding. For its simplicity, KMC can be applied everywhere, including peripheral maternity unit in a low-income countries. Proven to be neonatal life-saving medical practices that can be applied affordably, WHO endorses strongly KMC to the whole countries, especially low-income economic. Applying KMC for mothers means flexibility in terms of time and her tasks at home. With KMC a mother can still does house chores at the same time she is giving warmth for her baby's safety.

So far, psychology has conducted very little studies about KMC, although KMC has been best practiced everywhere in the world as an effective care for LBW babies, endorsed by many hospitals and health-professionals. Charpak et al. (2005) stated that only a few studies have reported studies on parents' well-being or on infants' development after KMC. From the standpoint of psychology, almost none that we find any study explaining two way directions of factors affecting KMC and its effects. The study focuses on identification of KMC success from psychological point of view, especially how family resilience and social

capital performed as the psychological success factors, contributing for saving LBW babies life. *Research question formulated as* how does family resilience and social capital being the success factors of KMC for saving LBW babies life? The objectives of the study are to build a comprehensive description of how psychological factors enhancing family practicing KMC. The result of this study eventually helps health professionals to support families doing KMC. But for psychology the study decreases gap in the area of social and health psychology, especially theories about family and health behavior, family resilience and social capital.

Family resilience refers to the ability to withstand and rebound from adversity, including dynamic processes encompassing positive adaptation, within the context of significant adversity (Luthar et al., in Walsh, 2002). Early studies focused more on traits relevant to resilience, hardiness. Resilience was viewed as an inborn or acquired on one's own life, expanded within the context of socioeconomic disadvantages, urban poverty, community violence, and catastrophic life-events. Now, resilience came to be viewed in terms of interplay of risks and protective processes over time, which involving individual, family and larger sociocultural influences (Walsh, 2002). With this frame in mind, family is one of important lead in this study and accordingly, researcher finds noted themes to be developed. Within quantitative approach tradition, the term "resilience" has been criticized for being inconsistent in conceptualization (Ayed, Toner & Priebe, 2018). In this context researcher's intention was to develop a comprehensive explanation which rooted on contextual repercussions.

Nahapiet and Ghoshal (in Chiu, 2006) said that social capital can be defined as the network of relationships possessed by an individual or a social network, and set of resources embedded within it. Social capital influences the extent to which interpersonal sharing knowledge occurs. There is also three distinct dimensions of social capital, first, structural or the overall pattern of connections between actors. Second, relational or the type of relationships that have developed, third, cognitive or dimension of shared meanings that have been formed. Social capital also characterized with three different meanings (Zhang, DeBlois, Deniger & Kamanzi, 2008). Social capital is an attribute of communities in the form of networks and relationships. But also social capital reflects values, norms, expectations and even social sanctions. And the last one, social capital has some positive effects on health, education and social welfare.

Family resilience and social capital considered in this study as researcher's main horizon, which guides the whole process of study. This basic idea of theoretical foundation is very significant in developing practical and scientific implications of KMC as a life-saving treatment for LBW babies.

2. Methods

The purpose of the study is to build a comprehensive description of how psychological factors enhancing family practicing KMC. This study is grounded in generic qualitative research. The approach focused on experiences of parents (family) during KMC treatment at hospital and home, and how the experiences represent psychological factors involved during the time of crises. Qualitative inquiry helps formatting result of this study, as a unique finding of exploring problems and data that actually proximal to social psychology and developmental psychology. Within the context, how the process in family practicing KMC will also help health professionals about the benefit of KMC for family and community. Researcher used in-depth interviews and casual observation for data collection in two families practicing KMC. The two families live in Karawang, West Java. My encounter with the families took around two weeks during May 2017, preceded with rapport stage a month before. I stayed in the village, rented a house near research subjects' home. It gave me opportunities to observe closely these two

families in their own context of community.

The study employed technique of analysis, thematic analysis in psychology suggested by Braun and Clarke (2006). A thematic analysis is a method for identifying, analyzing and reporting patterns of themes within data. With its 6 stages of model, it goes further interprets various aspects of study subject. For generic qualitative research, model of thematic analysis made clear by its theoretical position and also how it reflects points of reality.

3. Results

Main source of data for this research is two families which has used KMC technique in hospital and home.

One family has baby KMC (now 2 years old) born with 1100 gram bodyweight. His father is a plant worker and his mother a full-time house wife (named in this study ER/mother and YA/father). Baby Fardan was hospitalized with incubator and KMC for 41 days and continued with KMC at home for two months.

The other family (named Sur/mother and Jo/father) has KMC baby with 1400 gram bodyweight. Baby Noel was hospitalized with incubator for 18 days and continued with KMC at home for three months.

ER and YA have shown that since the day baby Fardan was born, the family has changed a lot. The condition as LBW babies turned to be a moment shared by this couple and the eldest son as binding them closer than before. During KMC at home, the couple worked together, as the mother conducted KMC and father took care of the house and all financial needs. KMC for this family labeled:

"berkah" or blessings;

"penolong" or helper;

Although the couple felt devastated by the condition of Baby Fardan, they cannot let themselves drown in this complex problem. ER as mother of two, tried hard to learn the new skills of KMC at hospital, before taking baby Fardan back home. And YA as father soon realized that the crisis could be reversed in to blessings, by his eagerness to support his wife doing KMC. During KMC at home, friends and neighbors didn't support this couple, actually they saw KMC far more dangerous for LBW babies, even perceived as "*aneh*" or weird thing to do. Reactions from friends and neighbors didn't have influence on ER and YA, it seemed that midwives that has helped this couple, way before, has prepared the couple to face reactions about KMC. That is why one of the two themes that resurfaced dominantly in the verbatim is "penolong" or helper. The couple agreed that they cannot find someone for helping them conducting KMC but themselves. They have to work together to save baby Fardan.

Sur and Jo faced a different challenge of KMC at home. This family has a very good relation with clinic where baby Noel were born. Sur took care of the baby alone, almost no help from big family circle or friends and neighbors. Jo felt some hesitation about KMC and kept asking his wife why the baby didn't put in incubator at hospital. Sur trusts KMC and eventually struggled hard to save the baby with KMC. The couple labeled KMC as:

"*membingungkan*" or confusing;

"bahaya" or dangerous;

"*keluarga*" or family;

Jo, the head of family, finally perceived baby Noel brought a sense of crisis to the family. Sur many times, during the interview, repeatedly told that her husband handling the crisis by open his mind that LBW baby is not scary. The family took some times to help each other, especially to make sure baby Noel was wrapped in KMC continuously. Theme "membingungkan" or confusing refers to phenomena of how baby Noel being a baby that they don't understand. LBW babies sometimes triggers the feelings of fear and helpless. As a parent Jo and Sur

tried their best to learn KMC and how to conduct KMC well. But it is not always smooth, especially when the baby was ill or showed syndromes of morbidity. “Bahaya” or dangerous is another theme that is always stated in the verbatim. LBW babies bring emotion of dangerous almost all the time. Along the way, 3 months doing KMC, has brought this couple to a stage of perception, LBW babies is a time of crisis, which can turn into worst situation without prior notice. Finally “keluarga” or family solved all the crisis. Being together as a husband and wife, has helped baby Noel becoming better every day.

Inter subjective analysis showed some important common themes between two research subjects:

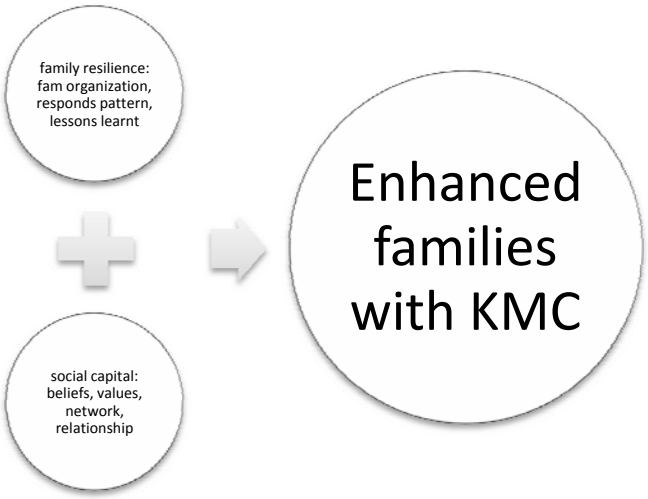
1) Family resilience

Family resilience within this study reflects how the family bouncing back in a time of crisis, becoming resilient as they deal with the challenges in their lives. Significant findings are family resilience maintains mental health of the family, family organizing responds to crisis (in this context responds about LBW babies care) and lessons learnt from LBW baby problems.

2) Social capital

Social capital in this context shifts from mere literally meanings of network and social ties, social capital represents values and beliefs, sympathy, solidarity and trust. Social capital reflected network and relationship with health professionals from clinics where LBW babies born, big or extended family and neighbors around home. The most effective social capital is the one with obvious support for the condition of LBW babies. In this case, network with hospitals and clinics becomes very important up until now, for supervising LBW babies overall health.

Common themes in graphic:



Picture 2 Important Themes Based on Inter Subjective Analysis

4. Discussions

This generic qualitative study proves that there are two psychological success factors playing role as supporting factors of KMC. One is family resilience and the other is social capital. Psychological factors often overlooked when health professionals discussing factors affecting KMC. Medical treatment such as KMC, is the one which has treatment component lies in the hands of mother and family. KMC at first has been denied as something unscientific (Tessier, 2003). After 40 years of experiences around the world, health professionals

become more confident about the effectiveness of KMC treatment. Relationship with health professionals and values of health and family has been a success factor for LBW babies with KMC. But social capital based on community still lacks of engagement of community members. LBW babies facing a deep-rooted mindset of community, which perceives LBW as mortal illness rather than a condition which has probability of getting better and the baby could grow in a healthy stages.

This study reflects a significant shift of resilience meaning, especially in a health context. Resilience means character and altogether a process of becoming resilient. It shows a bouncing back situation. The family has built a mechanism of crisis handling, with a heavy load of learning and learning by doing. It also shows immunity. Whether with the same baby, or if the family will have another LBW baby, the family will try hard to reach a higher degree of family's general health. And resilience reflects grow, in terms of familial organization or family's pool of knowledge on health issues.

5. Conclusion

Psychology can explain factors which usually avoided by health professionals, that contributes significantly for preventing neonates and LBW babies' death.

Acknowledgement

This research received grant from Universitas Pancasila in 2016 for academic purposes.

Declaration of Interest

The authors report no conflicts of interest in this work.

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