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DEVELOPMENT

Barriers to Implement Kangaroo Mother Care among Post- Natal Mothers with Premature Low Birth Weight Babies

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1 INTRODUCTION

Kangaroo Mother Care (KMC) also known as “skin-to-skin care” is an evidence based approach of caring for new born infants where the mother uses her own body temperature to keep her infants warm (Kavitha *et al.*, 2012). It reduces mortality and morbidity in premature Low Birth Weight (LBW) babies, which was first developed in developing countries (Seidman *et al.*, 2015). It is the best method to meet the infant’s essential needs which are warmth, nutrition, protection, stimulation, parental contact and love (Solomons, 2012). During KMC, the mother holds her baby in an upright position in skin-to-skin contact under her clothes (DiMenna, 2006).

LBW and prematurity is a major contributor to both neonatal and child mortality because they lack the ability to control their body temperature. It is estimated that 15% to 20% of all births worldwide are LBW and it represents more than 20 million births a year (UNICEF, 2015). According to the Sri Lankan health records, the premature delivery rate is considerable and it is around 24 000 preterm deliveries per year (Family Health Bureau, 2012). Kavitha and his colleagues state that KMC is the most reliable method for premature LBW

babies to keep warm, and also it gives many benefits for both the baby and the mother as it provides better thermal care, improves the survival of preterm and LBW infants and reduces the length and cost of hospitalization (Kavitha *et al.*, 2012).

Based on increasing evidence of the positive effect and outcomes of KMC, it has been rapidly accepted worldwide (Shrivastava, 2013). When implementing KMC, some of the barriers were identified. Lack of awareness regarding KMC among mothers, lack of support from health staff, cultural effect, and fear/anxiety/shame of having a preterm baby impaired this process (Chan *et al.*, 2015). Therefore, this study was focused to identify barriers related to implementing KMC among post-natal mothers with premature LBW babies. In this study, barriers were categorized in to four groups; mother’s existing knowledge regarding KMC, perceived physical barriers, psychological barriers and socio-cultural barriers among post natal mothers with premature LBW babies to implement KMC.



2 METHODOLOGY

A quantitative descriptive study was conducted in the Neonatal ICU and SCBU, Well Baby clinic, mother baby care unit and post-natal wards at the Provincial General Hospital (P.G.H), Rathnapura which is one of the biggest full-fledged, tertiary care hospitals with 1320 beds. The population for this study was post-natal mothers with premature LBW babies who were admitted to the three maternity wards, Well Baby clinic, Neonatal ICU and the mother baby care unit of P.G.H Rathnapura. Purposive sampling technique was used to select the study subjects. For this study, 150 mothers who were between 18-40 years of age and premature, low birth weight babies who were below two months of age were selected and premature babies who were between 28-34 weeks of gestational age and below 2.4 kg of birth weight were selected. When collecting the data, it was done without any disturbance to the baby. The questionnaire consisted of five sections including socio-demographic characteristics, knowledge, physical barriers, psychological barriers and socio-cultural barriers to implement KMC. The validity of the questionnaire of this study was achieved using a panel of subject experts and relevant literature. Reliability was established using a pilot test by collecting data from ten post natal mothers with premature and LBW babies who did not actively participate in the study but met the inclusion criteria of the study.

Ethical approval was obtained from the ethical committee of the Colombo South Teaching Hospital (CSTH). To collect data, permission was obtained from the Director of the P.G.H. Rathnapura and consultants, matrons, ward sisters or in-charge nurses of relevant sections and wards. Data collection commenced after obtaining informed consent from the convenience sample of mothers.

One hundred and fifty questionnaires were completed from post natal mothers with premature and low birth weight babies in postnatal wards at Provincial General Hospital Rathnapura. Resulting in a total response rate of 88%. Data was analyzed by using Microsoft Excel 2010 and data was expressed as a frequency distribution and percentages.

3 RESULTS AND DISCUSSION

A total of 150 post-natal mothers participated in this study. Demographic characteristics are shown in Table1.

Table1. Demographic characteristics of participants

Variable	n	%
Age (years)		
18 – 25	46	30.6
26 – 30	61	40.6
31 – 35	32	21.3
36 – 40	11	7.3
Education Level		
No education	5	3.4
Passed grade 5	23	15.4
Passed O/L	74	49.3
Passed A/L	32	21.3
Higher education	16	10.6
Type of employment		
Housewife	96	64
Self-employment	14	9.6
Semi – government	6	4
Government	27	18.3
Private	7	4.1

3.1 Knowledge regarding Kangaroo Mother Care

When considering the knowledge regarding KMC, it was found that 90.67% mothers have heard about it. Out of those mothers, 95.49% mothers had knowledge about the correct position of KMC while all mothers knew that KMC helps with the wellbeing of their baby. According to the findings, 98.48% mothers knew that both



parents can do KMC whereas 54.55% of mothers knew that KMC is a recommended method by WHO to practice worldwide.

3.2 Physical barriers against implementing Kangaroo Mother Care

When considering the physical barriers, difficulty in sitting for a long time (19.18%) and difficulty in waiting in the KMC position for a long time (17.91%) were identified as major physical barriers to implementing KMC while body aches (4.55%), low health care facilities to protecting privacy (7.2%) and low space (9%) were not significant barriers in implementing KMC.

3.3 Psychological barriers against implementing KMC

59.09% of mothers had a fear to handling the small infants with a cannula, N.G tubes, monitors and nasal prong oxygen while 22.72% mothers thought that KMC causes pain to their babies.

3.4 Socio-Cultural barriers against implementing KMC

Lack of information regarding KMC (96.21%), lack of knowledge on benefits of KMC (22.73%) and traditional wear (31.82%) are identified as major socio-cultural barriers to implementing KMC.

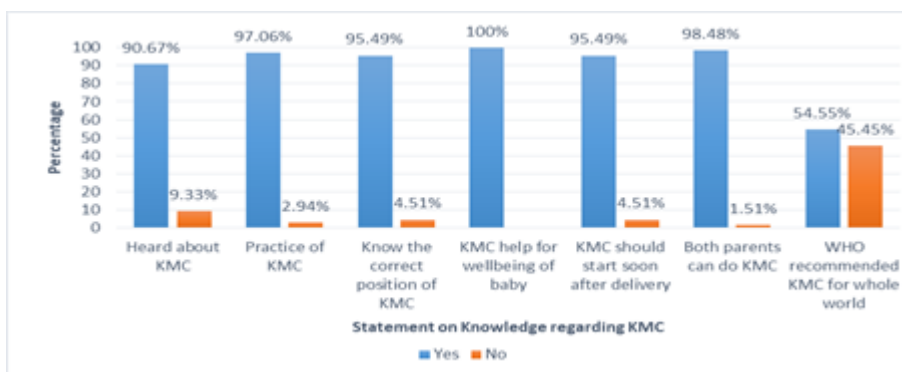


Figure 1: Mothers' Knowledge regarding Kangaroo Mother Care

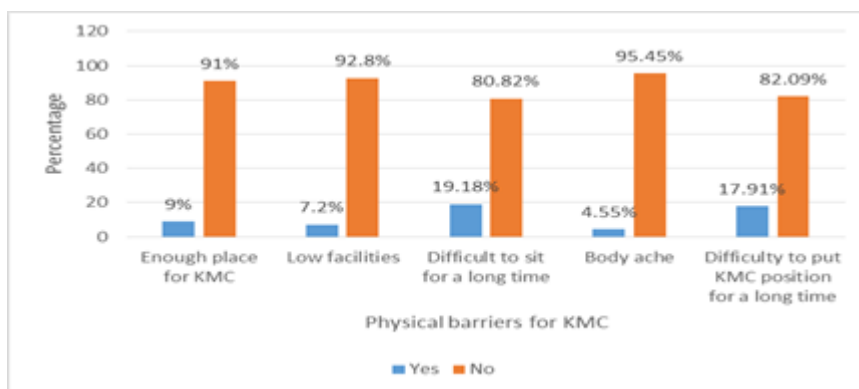


Figure 2: Physical barriers against implementing KMC



Figure 3: Psychological barriers against implementing KMC

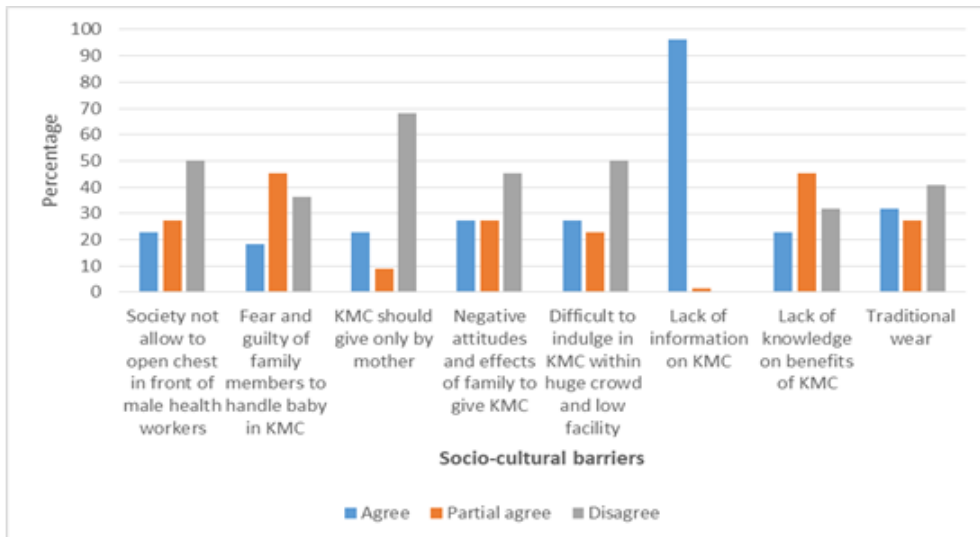


Figure 4: Socio-cultural barriers against implementing KMC

4 DISCUSSION

The purpose of this study was to reveal the barriers against implementing KMC among postnatal mothers with premature low birth babies in PGH, Rathnapura. When considering the knowledge regarding KMC, the findings highlighted that a majority of mothers had good knowledge regarding KMC where it gives similar results to two studies done in India (Castalino *et al.*, 2014; Kavitha *et al.*, 2012).

In this study, the difficulty in sitting for a long time and difficulty in holding the baby in the kangaroo position for a long time were identified as the main physical barriers against implementing KMC. But fatigue is was not a barrier for any mother in this sample. Similar findings were reported by Seidman *et al.* (2015) concluding that discomfort on the chest or back of the mother and discomfort related to temperature were barriers for a



considerable amount of mothers of that sample. Furthermore they highlighted that a lack of resources of the working environment as a main physical barrier which is a contrast with the findings of this study as only 7.2% of mothers identify low facilities as a barrier.

From current study findings some psychological barriers were identified including the fear of handling a small infant with a cannula, N.G tubes, nasal prong and monitors. This result is similar to the study which was done in USA (Blacke and Gregson, 2011). Nearly one fifth of the mothers thought that KMC would hurt their little baby. It was highlighted by a study result in Pakistan (Seidman *et al.*, 2015). Further, low facility to protect privacy during KMC was identified as one of the psychological barriers among post-natal mothers.

Regarding socio-cultural barriers against implementing KMC, maintain cultural acceptable privacy standards in the ward when practicing KMC is identified as the one of the barriers for a few mothers. The same result was found in studies in South Asian countries (Seidman *et al.*, 2015). Furthermore, it was found that low awareness on benefits of KMC is one of the socio-cultural barriers among post-natal mothers. In contrast to the current study, Blacke and Gregson (2011) found that mothers are well aware of the benefits of KMC in USA. In this study there were no barriers against implementing KMC by fathers. However, in settings like Zimbabwe fathers did not perform KMC due to the cultural and social norms (Chan *et al.*, 2015).

5 CONCLUSIONS AND RECOMMENDATIONS

It is critical to understand the barriers against practicing KMC for the end-users, often the mother, of this life-saving practice, which has many additional

benefits for both, the infants and the mothers. As a summary of this study, considering all the factors that have been investigated, it is evident that, there are some barriers against implementing KMC among post-natal mothers with premature, low birth weight babies. This study findings provided baseline data that will be useful in planning health promoting lifestyle interventions for post-natal mothers who have premature low birth weight babies.

After considering the findings, some tasks have been identified which will be implemented more successfully in the future. Giving continuous training using leaflets, posters, videos in relevant languages, conducting teaching sessions, using trained staff to demonstrate the method, KMC can be implemented. Single training is not enough for health care providers and it should be conducted at regular intervals. By addressing barriers and by building trust, effective uptake of KMC into the health system will increase and this will help to improve neonatal survival.

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