AN EDUCATIONAL STRATEGY SUPPORTING KANGAROO MOTHER CARE: INTERVIEWS WITH HEALTHCARE PRACTITIONERS

Wilma ten Ham-Baloyi
Department of Nursing Science, Nelson Mandela University
wilma.tenham-baloyi@nmmu.ac.za

Esmeralda Ricks
Department of Nursing Science, Nelson Mandela University
esmeralda.ricks@nmmu.ac.za

Dalena (R. M.) van Rooyen
Department of Nursing Science, Nelson Mandela University
dalena.vanrooyen@nmmu.ac.za

ABSTRACT

Kangaroo Mother Care (KMC) has multiple benefits for mothers, infants and healthcare organisations. Sound clinical decision-making regarding KMC is enhanced if healthcare practitioners are empowered through education and training, which is possible by developing an educational strategy. In this study perceptions of healthcare practitioners were therefore sought to explore and describe the content, format and requirements for such an educational strategy. Purposive sampling was done, and healthcare practitioners participated electronically and in either semi-structured face-to-face or telephonic interviews. The healthcare practitioners’ perceptions regarding format, content and requirements for the strategy were audiotaped, verbatim transcribed and qualitatively analysed using thematic analysis. Major findings indicated that the content of the strategy should include the theoretical concept of KMC and its practice. The strategy’s format needs to make provision for a target group existing of multiple stakeholders and various teaching methods and formats. The strategy’s frequency and duration depends on the type of strategy and the availability of staff that can be released to attend the educational strategy. Requirements in terms of facilitating factors to successfully implement this
strategy include buy-in and support of management, leadership, alignment of the strategy with existing structures, and also rewards and incentives. Participants agreed that an educational strategy must be flexible in terms of its content, format and requirements in order to be implemented in various contexts. Investigations into how an educational strategy could be further developed and implemented in different contexts could be fruitful to support sound clinical decision-making regarding KMC.

**Keywords:** clinical decision-making; educational strategy; healthcare practitioners; Kangaroo Mother Care

### INTRODUCTION AND BACKGROUND INFORMATION

Kangaroo Mother Care (KMC) involves care in which the neonate is placed in the kangaroo position and includes the following elements: vertical position of the infant between the mothers’ breasts, skin-to-skin contact (SSC), exclusive breastfeeding (EBF), and any type of medical, emotional, psychological and physical support for the well-being of both mother and infant (Nyqvist et al. 2010, 822). KMC has multiple benefits such as improving the mother-infant bonding and attachment, prolonged duration of breastfeeding and decreasing neonatal mortality of preterm babies (birth weight < 2 000 g) (Lawn et al. 2010, i145; Nyqvist et al. 2010, 822). Furthermore, this method requires few resources and is therefore cost-effective, which is crucial, especially in countries with scarce resources (Nyqvist et al. 2010, 820).

Owing to its benefits, the implementation of KMC can play a role in enhancing neonatal and maternal care by offering medical, emotional, psychological and physical support for both mother and infant (USAID 2012, 10). Sound clinical decision-making regarding KMC is improved if healthcare practitioners are empowered through education and training. In order to make clinical decisions, information is required (Tiffen, Corbridge and Slimmer 2014, 399). Providing text and electronic information on KMC, together with training on how to practice KMC, might enhance the healthcare practitioner’s decision-making regarding KMC and result in a reduction of undesirable events specifically in rural healthcare (Marshall, West and Aitken 2011, 233).

### PROBLEM STATEMENT

The researcher experienced a lack of healthcare practitioners’ (including midwives) education and training on KMC, resulting in limited sound clinical decision-making regarding KMC, which was evidenced by the absence of standardised practices regarding KMC, as well as a discontinuation of KMC after mother and newborn baby have been discharged from hospital. The lack of education and training of healthcare practitioners on KMC was confirmed in other studies done in Malawi,
Mali, Rwanda and Uganda (Bergh et al. 2014, 5). In a study done in the Western Cape of South Africa, 60 per cent of the staff indicated that they did not receive KMC training (Solomons and Rosant, 2012, 33). An educational strategy for healthcare practitioners to reinforce and implement KMC practices could be helpful to improve the midwives’ overall knowledge, attitudes and practices of KMC (Bergh et al. 2012, 40). However, when it comes to KMC education, there is no “one-size-fits-all” education model (Bergh et al. 2012, 40). Furthermore, no example of what an educational strategy entails or what its format should be, could be found in the literature, which led to the need to explore and describe the format, content and also the requirements of an educational strategy to facilitate the practice of KMC. Implementing this educational strategy could enhance sound clinical decision-making with regard to KMC.

AIM OF THE STUDY

This study aimed to explore and describe the perceptions of healthcare practitioners regarding the content, format and facilitating factors for an educational strategy to be implemented to enhance sound clinical decision-making with regard to KMC.

Definitions of keywords

Clinical decision-making is “a contextual, continuous, and evolving process, where data are gathered, interpreted, and evaluated in order to select an evidence-based choice of action” (Tiffen et al. 2014, 399).

Educational strategy is a plan or a programme that is extensively used to ensure that a certain message or lesson is passed from the teacher to the learner for a period (Bradshaw and Lowenstein 2013, 12).

Healthcare practitioners are any type of healthcare provider that is authorised to practice within their scope of practice.

Kangaroo Mother Care involves care in which the neonate is placed in the KMC position, skin-to-skin contact (SSC), EBF, and any type of support for the well-being of both mother and infant (Nyqvist et al. 2010, 822).

RESEARCH METHODOLOGY

The design

A qualitative, descriptive, exploratory and contextual research design was used.
Study population

Healthcare practitioners who are experienced in practising and educating about KMC in South Africa were interviewed using semi-structured interviews.

Sampling techniques

Purposive sampling was used to select suitable participants. Participants were included based on their experience in teaching KMC as part of their profession in either an academic or clinical context in South Africa. Eighteen participants were contacted by email explaining the study and asking the selected persons to participate voluntarily.

Sample

Twelve healthcare practitioners from a variety of disciplinary backgrounds agreed to participate, as illustrated in Table 1.

Table 1: Participants in the study (n = 12)

<table>
<thead>
<tr>
<th>Occupation and involvement in KMC</th>
<th>Participant no</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academics, educating midwifery students on KMC</td>
<td>Participants 1, 2 and 4</td>
</tr>
<tr>
<td>Private midwives educating mothers on KMC during antenatal classes and postnatally as well as educating healthcare professionals in the clinical setting</td>
<td>Participants 3, 9, 10 and 11</td>
</tr>
<tr>
<td>Paediatric specialist educating and coordinating KMC in the district</td>
<td>Participant 5</td>
</tr>
<tr>
<td>Neonatologists involved in educating and implementing KMC in the local healthcare institute</td>
<td>Participants 6 and 8</td>
</tr>
<tr>
<td>Neonatal nurses, educating and coordinating KMC in four provinces in South Africa (Eastern Cape, KwaZulu-Natal, Western Cape and Limpopo)</td>
<td>Participants 7 and 12</td>
</tr>
</tbody>
</table>

Data collection

The semi-structured interview method, as outlined by Grove, Gray and Burns (2015, 83) was used. This technique is used to obtain a detailed picture of the participants’ beliefs or perceptions about a certain topic. An interview schedule was used which included the following predetermined open-ended questions that guided, but did not dictate, the interview process (Creswell 2013, 164):

- What is your involvement with regard to KMC and teaching this concept?
When teaching healthcare practitioners about KMC, what is your perception of their information needs for sound clinical decision-making with regard to KMC?

What would be the format of the educational strategy used to enhance sound clinical decision-making concerning KMC?

What are the requirements in terms of facilitating factors for the successful implementation of an educational strategy to enhance clinical decision-making concerning KMC?

The interviewer probed when an answer required clarification or further explanation. The interview schedule was piloted during the first interview. As no changes needed to be made to the interview schedule, the data from this pilot interview were used in the main study.

A total of 10 semi-structured interviews, of which four face-to-face interviews with five participants (one interview with participants 1 and 2, one interview with participant 3, one interview with participant 4 and one interview with participant 5) and six telephonic interviews (with participants 6 to 11) of about 30–50 minutes were conducted by the first author from December 2014 to February 2015. Telephonic interviews were conducted owing to logistic constrains as participants were practising in different provinces. One participant (participant 12) preferred to answer the questions via email because of the participant’s busy schedule. Data collection was done until data saturation was achieved.

Data analysis

The recorded interviews were transcribed verbatim as soon as possible after the interviews had been conducted, and the interviews and the email were analysed thematically by the first author using an adapted version of Langdridge and Hagger-Johnson’s (2013) guideline for a three-stage analysis approach. In stage one descriptive coding was done. The transcribed data were read and colour coded and comments entered with colour-coded phrases. For example, all phrases related to the content of the educational strategy were coded in different shades of red, and data related to the format of the educational strategy were coded in different shades of green. This was repeated for each transcript. In stage two, interpretive coding was done by clustering the codes using a table where colour codes were grouped together. In phase three overarching themes and final subthemes were developed based on the grouped codes from the transcribed data. Phrases belonging to the themes/subthemes were referred to by the number of the participant and the line number from the transcribed data where it had been recorded.
Trustworthiness

The entire study was done by the first author under supervision of experienced supervisors (authors 2 and 3). An interview schedule was developed and reviewed by an expert in qualitative data analysis to ensure it generated data required to answer the research questions. Data analysis was done by an independent coder, and the main theme and subthemes were discussed with the authors to reach consensus about the findings. In presenting the data, the researchers remained as close to the evidence as possible (Creswell 2013, 253).

Ethical considerations

Ethical clearance for this study was obtained from the ethics board of the Faculty of Health Sciences at the Nelson Mandela University (ethics number: H14-HEA-NUR-016). The following ethical principles were observed: non-maleficence – the study did not cause harm to participants, autonomy – the participants could withdraw at any time, and justice – all participants received the same treatment.

RESULTS

Three main themes with subthemes were developed as portrayed in Table 2. Participants are referred to as P.

Table 2: Main themes and subthemes of the study

<table>
<thead>
<tr>
<th>Main themes</th>
<th>Subthemes</th>
<th>Participants (P)</th>
<th>Total participants (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content of the educational strategy</td>
<td>The theoretical concept of KMC</td>
<td>P1–P7, P9–P11</td>
<td>n = 10</td>
</tr>
<tr>
<td></td>
<td>The practice of KMC</td>
<td>P1, P2, P4–P7, P12</td>
<td>n = 7</td>
</tr>
<tr>
<td>Format of the educational strategy</td>
<td>Target group for the educational strategy involves multiple stakeholders</td>
<td>P1, P3, P4, P6–P10</td>
<td>n = 8</td>
</tr>
<tr>
<td></td>
<td>Educational strategy involves multiple teaching methods and formats</td>
<td>P1–P12</td>
<td>n = 12</td>
</tr>
<tr>
<td></td>
<td>Frequency and duration of the educational strategy depend on the type of</td>
<td>P1, P3–P7, P9–P11</td>
<td>n = 9</td>
</tr>
<tr>
<td></td>
<td>strategy and availability of staff that can be released to attend the</td>
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</table>
Participants generally indicated that there was a need for training due to a lack of knowledge regarding KMC (P5, P8, P9). Current education of healthcare practitioners on KMC is commonly done informally and practically (P5) and no formal educational strategy is usually used for KMC (P8). Identified themes related to the content, format of the educational strategy, and factors facilitating the implementation of this strategy, are outlined and substantiated by phrases directly derived from the participants in the sections below.

### Content of the educational strategy

Participants indicated two aspects that should be included: the theoretical concept of KMC, and the practice of KMC.

#### The theoretical concept of KMC

Participants indicated that the concept of KMC as well as the scientific evidence and background, including the benefits of KMC, should be encompassed in the educational strategy. This is outlined by the following participants’ statements:

If you have got lot of background and evidence it is so much more to support why you need to do it [KMC]. (P3)

We talk about background a picture of what KMC is globally and nationally and most importantly, the components of KMC, the parts of KMC, the Kangaroo position, nutrition and early child discharge to follow-up. The support of the mom and the baby. (P7)

To give them the background, show them pictures of how to do some and then collate with them the benefits for those mothers and babies. (P8)

One participant mentioned that the evidence that should be given serves to support the practice of KMC as it enhances the practice and implementation of KMC, as follows:

You need to define the concept, what is Kangaroo Mother Care? If we understand what Kangaroo Mother Care is, I think it could be easy for us to actually implement. (P4)
The practice of KMC

Participants emphasised teaching the practice and practical aspects of KMC when they stated:

They need to have a theoretical background but they need to see where KMC fits in to that. In the practical situation is how you actually practice it [KMC]. (P6)

Correctly picking up the baby in the prone position. Ideally not from the back (supine) position to the KMC upright prone position. Not ‘flipping babies around’ and the correct feeding of infants should be taught. (P12)

One participant also indicated that KMC is part of newborn care and includes basic care:

They must have basic knowledge of good newborn care. You must know that the baby needs those observations to be done. What about the blood sugar, so that’s feeding? How do you keep the baby warm, what happens to infections, how to prevent infections, and management? (P6)

Format of the educational strategy

Under the format of the educational strategy three themes emerged: the target group, the teaching methods and formats, and the frequency and duration of the educational programme.

Target group involving multiple stakeholders

KMC includes multiple stakeholders as they are part of a multidisciplinary team approach and therefore the educational strategy should target all healthcare practitioners involved in such care. This is outlined in the following statements:

I think all the healthcare workers working with babies on those wards; staff nurses, the sisters, you know if it is a teaching hospital also the students. (P10)

Everybody that is going to be involved in the care of the baby and I think the unit manager definitely should be. But I also think when you do have to train doctors. (P9)

Multiple teaching methods and formats

When asked about the format of the educational strategy, participants mentioned multiple teaching methods and formats that could be used. The most frequent methods indicated by the healthcare practitioners were in-service training (P1, P3, P5, P7, P9, P12), and symposiums, seminars, forums or workshops (P2 to P7). Other methods included videos or DVDs (P3, P7, P9 to P11), involving mothers to demonstrate and
talk about KMC (P1, P5, P8, P11), and visits to the health facility where KMC is practised (P5):

To actually have DVDs available with that they can see with the evidence of what happens with the baby on KMC. (P9)

You can include the mothers, practical things to show, you can have the moms coming in and show how it works. (P11)

If you are in-service training where you training nurses you can already present some basic concepts [of KMC] there. (P5)

You can do it in a symposium or a seminar session. If we have regular child health educator forum that you would present it as a topic that you get somebody that can talk about it. (P3)

The purpose of teaching methods such as symposiums, seminars or workshops was mainly mentioned to reinforce and update healthcare practitioners about KMC, as outlined by the following statement:

Knowledge about KMC does need to be reinforced by workshops. Just to keep reminding them and giving information. (P7)

The academics and midwives (P1, P5, P9 to P11) in the sample indicated a need for meetings to share experiences, as outlined by one of the participants:

Those opportunities for nurses to get together at a regular meeting place at your facility programme where you can discuss these things and share the experiences. (P5)

This meeting could be part of an association, which was stated by another participant:

We do not have a called midwives association that we have meetings for … so perhaps just something on that would be awesome. (P11)

Frequency and duration

The frequency and duration of the educational strategy were indicated differently among participants. The frequency can include weekly, monthly, or quarterly sessions. However, monthly sessions seemed to be preferred as outlined by one participant:

In the unit it is possible for me to do it at least once a month. Because in this once a month we will be having a well-structured thing that is going to happen and you cannot do it for less than two hours. (P4)

The duration was usually indicated as one to two hours maximum, which is outlined by the following statement:
You could possibly do first and second teatime, so like the hour and at least the people that are in the unit [are able to attend]. (P11)

However, the educational strategy’s frequency and duration depend on the type of strategy and the capacity of the organisation for healthcare practitioners to attend, as for example hospitals sometimes struggle to release staff. This was outlined by the following statement:

And then you can decide for those settings what is practical. Do you run weekly training or monthly training? (P5)

Facilitating factors
Four facilitating factors that enhance the implementation of the educational strategy were identified: buy-in and support of management, leadership, alignment of the educational strategy with existing structures, and rewards or incentives, and are outlined below.

Buy-in and support of management
Buy-in and support from management were considered important to make the implementation of an educational strategy a success. To ensure buy-in and support for the strategy, informing and updating management were found to be important as mentioned by the following participants:

And there is not going to be a benefit if the whole institution is not going to buy-in to the idea and they have support from management or managers within the maternal setting. So the managers need to be on board. (P1)

So often it helps to spend a bit of time with managers, give them one- or two-hourly overviews of what this entails. (P5)

A type of support that management could offer to enhance teaching KMC in the healthcare institution was writing KMC into policy, as stated by one participant:

You target your unit managers and they have to write it into protocol … And then you teach it and they just have to do it. (P3)

Leadership
Leadership was mentioned by several participants. For example, a facilitator who teaches KMC and supports it was mentioned by one participant. This could be helpful especially in the public sector where there are staff shortages:
There needs to be a facilitator. They will see they are getting quite educated in terms of the KMC … If we don’t have drivers, people that take responsibility for it in practice, it will not continue. (P1)

So you would have key people that you would identify … You can get your key midwives in certain areas. You can ask them this is the topic, could you go and present it. (P3)

Alignment of the educational strategy with existing structures

Participants indicated that teaching and learning should be embedded in the organisation’s existing programmes, for example the organisation’s quality improvement programme:

I think every teaching training up-skilling, it should be embedded within the quality improvement programme. (P5)

Furthermore, in order to gain support and accountability for the implementation of the educational strategy, this strategy should also be aligned with national standards:

You have to look at audits and linking it [the educational strategy] to things like national core standards. It is a basic norm and if it has to state in the document and then it becomes much easier to hold managers accountable, irrespective how much support they are given staff that have been trained. (P5)

Rewards and incentives

Rewards such as nominations, and awards which can be used to stimulate healthcare practitioners to attend educational opportunities related to KMC were mentioned by one participant:

I have also thought that they can do a stage where you can have nurses a year in the hospital you could each month have nominations and then pick one a year and then they have to get to a national conference as a prize. (P7)

Attaching points for continual professional development (CPD) to the educational opportunity to enhance the interest of healthcare practitioners to attend the educational strategy sessions was also mentioned:

In any kind of profession you need certain CPD points every year, so if you attend the course it is not the information you gain and enrich yourself in there but also gives you some sort of points … would be very efficient. (P10)
DISCUSSION

Most participants found that having evidence for a practice or intervention such as KMC is important in order for the educational strategy to be successfully accepted and implemented. Furthermore, mention was made of the basic skills and information needed to practise a clinical or practical subject such as KMC, as part of the content of the educational strategy (Titler 2008). Providing the scientific evidence of a practice when developing and implementing the educational strategy is important (Kearney-Nunnery 2016, 323). Although not mentioned by the participants in this study, evidence should be used in conjunction with clinical expertise and patient values to guide clinical decision-making (Titler 2008). The skills taught by the educational strategy should therefore be substantiated with scientific evidence as well as by the patients’ perspectives.

Participants also agreed that KMC, as an intervention, includes various stakeholders and should therefore target various stakeholders. This finding was confirmed by Bergh et al. (2016) who implemented KMC in three countries using training programmes, which were driven by multiple stakeholders including medical practitioners, nursing/midwifery professionals, public health specialists and psychologists who all had a shared concern about maternal and newborn care. When developing the educational strategy, team members of various professions and also patients should be involved in order to enhance standardisation of care. The patient’s involvement may also assist in enhancing the buy-in to the educational strategy that is based on best evidence and that promotes patient-centred care (Bleser et al. 2014, 41). Furthermore, participants agreed that the educational strategy should include various teaching methods and formats, depending on the needs of the stakeholders. Various teaching methods and formats such as posters, videos, booklets used for education and training of KMC were also found elsewhere (Bergh et al. 2016). Its frequency and duration depend on the type of strategy and needs of the healthcare practitioners within the organisation. Although no clear guidelines were provided about methods and strategies to be used during KMC interventions, existing training modules or curricula and existing methods such as pre- and post-course questionnaires, performance checklists and models could be adapted or revised to local needs or target audiences in order to provide contextualised education based on the needs of specific healthcare practitioners (USAID 2012, 20). Guidelines regarding the frequency and duration of an educational strategy to teach about an intervention could not be confirmed elsewhere as they depend on the training outcomes to be achieved and availability of staff in each healthcare institution. However, for KMC it seems that a one-month comprehensive training or two weeks of training for some aspects of KMC could be feasible (Bergh et al. 2012, 40).

However, training in KMC was found to require time and needs to be ongoing (Bergh et al. 2016; Brantuo et al. 2014, 423). The need for ongoing education of healthcare practitioners and materials to enhance learning about KMC was also
indicated by the participants of the study. This was supported by Bergh et al. (2014, 8) who further state that the nurse manager could play a role in providing support and opportunities for ongoing education. Furthermore, for KMC to be implemented, new staff members should be orientated (Bergh et al. 2014, 5). The educational strategy could therefore serve to teach students or junior staff, and should be included in the curriculum of a variety of training courses for healthcare practitioners. The strategy could also be used to reinforce knowledge about an intervention with practicing healthcare practitioners.

Furthermore, at organisational level, the need for buy-in and support of management and leadership was most strongly mentioned, besides aligning the strategy with existing structures, and rewards and incentives. A form of support that seemed to be successful, is making the educational strategy part of the organisational structures. Having a policy about the intervention enhances teaching and reinforces knowledge regarding that intervention (Hénard and Roseveare 2012, 14). It also promotes the educational strategy to be prioritised in the organisational budget. The policy could outline what information about the training should be provided and by whom (Hénard and Roseveare 2012, 18). Leadership in the form of a champion who has an interest in maternal and newborn care and KMC in particular could enhance the implementation of the educational strategy by using mentorship and reinforcement of information and skills (Bergh et al. 2016; Gagliardi, Webster and Straus 2015). This mentor or facilitator should be knowledgeable and skilful (regarding KMC) and motivated to implement the educational strategy (Center for Creative Leadership 2016). Furthermore, the facilitator should preferably be someone who is familiar with the organisation. Incentives are found to enhance the implementation of an intervention or best practice (Nilsen 2015). Incentives, such as CPD points, accreditation or awards should preferably be attached to the educational strategy and be supported at management level to enhance the interest and participation in the strategy. However, attaching CPD points to an educational strategy for a KMC intervention could be viewed as a unique finding of the current study. This could be used to promote and enhance further training and should be considered while developing educational strategies in future.

RECOMMENDATIONS

Before developing and implementing the educational strategy, it is recommended that a contextual needs analysis be conducted in the organisation. This analysis will determine what educational methods and strategies should be used, the need, frequency and duration of this strategy, as well as the organisational structure and support for the strategy so that it can be aligned with existing organisational structures. The indicated need for an association by participants could be a platform through which an educational strategy can be implemented, for example in the form
of meetings with healthcare professionals and training regarding KMC during those meetings.

LIMITATIONS OF THE STUDY

In interpreting the results of the study, one should be aware of the small sample size and that the findings are derived from healthcare practitioners from a resource limited context, such as in South Africa. Nevertheless, findings could be used by healthcare practitioners or management wishing to develop and implement an educational strategy regarding a clinical practice or intervention such as KMC. Implementing the educational strategy could enhance sound clinical decision-making in various healthcare contexts.

CONCLUSIONS

Although no firm conclusions can be drawn from the current study, some issues could be considered by healthcare managers and healthcare practitioners wishing to develop and implement an educational strategy to enhance the implementation and use of certain practices or interventions in order to improve sound clinical decision-making and patient care at their institutions. This study showed that an educational programme requires the inclusion of evidence regarding the intervention or practice, targeting multiple stakeholders, methods, teaching strategies and formats. Furthermore, the organisation should support the educational strategy. Further investigations should be done to determine how an educational strategy could be developed and implemented in various contexts, and what role the stakeholders and the organisation could play to support the implementation of an educational strategy.

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