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"Like works of our hands are giving testimony!" A qualitative study on kangaroo mother care and health worker empowerment in southern Malawi

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Abstract

The purpose of this paper is to explore health worker perspectives of empowerment associated with kangaroo mother care in southern Malawi. We conducted a secondary analysis of 27 in-depth interviews collected between May-Aug 2019 at a large Malawian tertiary hospital and three rural referral hospitals. Data was analyzed using a thematic approach with NVivo 12 software (QSR International, Melbourne, Australia). Health workers reported positive perceptions of kangaroo mother care because it helped save the lives of preterm and low birthweight infants who previously did not frequently survive. This gave them hope due to increased capacity to care for low birthweight infants and subsequently increased job satisfaction. Experiences of success supported workplace morale and strengthened commitment to their clinical roles. This study suggests that kangaroo mother care may support health worker empowerment and resilience in their work. *(Afr J Reprod Health 2021; 25[3s]: 65-73).*

Keywords: Kangaroo care, empowerment, job satisfaction, health worker perspectives, low and middle income countries, Africa South of the Sahara, Malawi, qualitative studies

Résumé

Cet article-ci se prend pour son objectif d'explorer les perspectives de l'autonomie associée avec les soins maternels kangourous implémentés aux cliniques médicales dans le sud du Malawi. Les perspectives de l'autonomie dont on parle ici appartiennent aux travailleurs de la santé. Nous avons effectué une analyse secondaire de vingt-sept entrevues collectionnées entre les mois mai et août en 2019 au Malawi à une hôpital de soins tertiaires et aux trois hôpitaux d'aiguillage ruraux. Les données ont été analysées en utilisant l'approche thématique avec le logiciel NVivo 12 (QSR International, Melbourne, Australia). Les travailleurs de la santé ont communiqué les perceptions positives des soins maternels kangourous parce que ceux-ci les ont aidé à sauver les vies des nourrissons prématurés et de faible poids de naissance qui autrefois souvent n'avaient pas survécu. Ceci leur a donné de l'espoir parce que leur capacité de prendre soin des nourrissons de faible poids de naissance est accrue et ensuite leur satisfaction au travail a augmenté aussi. Ces expériences de succès ont soutenu leur morale au travail et ont renforcé leur engagement envers leur rôles cliniques. Cette étude-ci suggère que les soins maternels kangourou peuvent promouvoir l'autonomie des travailleurs de la santé et leur résilience dans leur travail. *(Afr J Reprod Health 2021; 25[3s]: 65-73).*

Mots-clés: Les soins maternels kangourou, l'autonomie, satisfaction au travail, perspectives des travailleurs de la santé, pays à revenu faible et intermédiaire, l'Afrique au sud du Sahara, Malawi, études qualitatives

Introduction

Kangaroo mother care (KMC) was developed by paediatrician Edgar Rey in the early 1980s in Colombia as a solution for a shortage of incubators to care for preterm infants in a resource-limited setting as well as concern about the impact of mother and newborn separation with incubator

care[1]. Initiated with support of medical staff at health facilities, KMC is characterized by skin-to-skin contact of a baby on a mother's chest as a simple method for thermoregulation, but also to support frequent breastfeeding practices and as a means of bonding and attachment[1]. In the past three decades, literature continues to grow on the efficacy of KMC to reduce neonatal deaths, sepsis and hypothermia and increase rates of exclusive breastfeeding[1-3]. KMC has the potential to avert an estimated 50% of preterm deaths[4] and is strongly recommended by the World Health Organization (WHO) for the routine care of low birthweight babies as soon as clinically stable[5].

In addition to direct health benefits, KMC humanizes the care in neonatal units that is otherwise characterized by high-tech machines that alienate caregivers[6] and has benefits in mother-infant attachments[7-10]. A pioneering randomized controlled trial in Colombia in the early 1990s documented the empowering effect of KMC, where mothers felt more competent to care for their preterm infant and reported increased readiness to detect and respond to infants' cues than those providing conventional incubator care[7]. A follow-up with trial participants 20 years later found that KMC had significant, long-lasting social and behavioural effects and that KMC parents were more nurturing compared to those who experienced incubator care[10]. Other recent studies in South Africa[11], Sweden[12] and India[13] have also found KMC to positively influence mother-infant bonding and self-efficacy. Maternal empowerment and bonding, defined as feeling closer to and more capable of taking care of her infant, is frequently reported as an enabler to KMC practice by both health workers and caregivers[6,14-22].

While benefits in maternal-newborn bonding and caregiver empowerment in relation to KMC has been widely lauded, there is a gap in exploring potential benefits on health worker empowerment. Empowerment may be conceptualized as both a goal and a process to increase a person's control over the determinants of their quality of life through strengthening self-confidence, self-efficacy knowledge and autonomy[23]. Health worker empowerment can help mitigate burnout due to emotional exhaustion and low self-efficacy[24-25]. Within the Malawian hospital context, health workers face demoralizingly high rates of neonatal death and heavy burdens of work while coping with staffing shortages[26-27]. A study with maternity staff at a Malawian referral hospital found that 72% reported emotional exhaustion, 43% reported depersonalization, and 74% experienced reduced personal accomplishment[28]. The Malawian study found that health workers in the maternity department appeared to experience burnout features more frequently than other medical settings and countries[28]. Consideration of health worker morale and burnout is critical to improving quality of care at health facilities in Malawi and implementing health interventions, which requires health workers to adjust to new responsibilities, roles and practices to facilitate. Service provider acceptability, engagement and leadership are recognized as key enablers of KMC practice[14,15,29].

Malawi was one of the early adopters of KMC, piloting the intervention in 1999 and integrated into national policy in 2005[30]. Despite KMC being national policy in Malawi for over the last decade, use of KMC is limited[30]. The purpose of this paper is to explore health worker perspectives of empowerment in terms of self-efficacy, self-confidence and job satisfaction associated with KMC practice in southern Malawi.

Methods

The study is reported according to the Standards for Reporting Qualitative Research (SRQR)[31]. The SRQR checklist is included as Supplementary File 1.

Study type

In this descriptive qualitative study, we undertook a secondary analysis of in-depth interviews with nurses and other health workers in southern Malawi on their experiences implementing KMC. We followed a constructivist grounded theory approach to inductively explore themes that emerged from narratives of social interactions of health workers with other staff, their workplace, family members and infants undergoing KMC[32,33]. These interviews were originally collected for the "Integrating a neonatal healthcare package for Malawi" project, which seeks to inform the scale-up of low-cost and locally appropriate innovations to improve newborn care at low-resource health facilities[34]. The project is a part of the Innovating for Maternal and Child Health in Africa (IMCHA) initiative funded by the Canadian International Development

Research Centre, Global Affairs Canada and the Canadian Institutes for Health Research.

Research team

Qualitative research was conducted in collaboration between Malawian (ALNM, SS) and Canadian (MWK, MV, KP) social scientists with support of pediatric clinicians (LN, QD, EM, DG, KK) on the project team. Credibility of findings is supported by member checking across the multinational interdisciplinary team under the leadership of local health systems (ALNM) and pediatric experts (QD, KK) from Malawi. Data collection was conducted by four Malawian research nurses coordinated by a public health specialist (SS) hired as part of the IMCHA study and underwent an intensive three-day training in qualitative research methods led by ALNM and MWK. To minimize potential role biases, participants did not know interviewers prior to the study.

Research setting

The study was conducted at one tertiary-level central hospital and three secondary-level district hospitals in southern Malawi. The two government district hospitals and one private not-for-profit mission hospital included in this study served as regional referral centres for their rural districts. The district hospitals referred to the central hospital located in an urban centre for tertiary-level care. All four hospitals provided maternal and child healthcare free of charge to patients and had a separate room dedicated for KMC, close to nursery units.

Recruitment and selection

The sample was purposively drawn to include service providers and supervisors working in neonatal health at the four health facilities. At the tertiary hospital, we recruited nurses, clinicians, registrars and pediatric consultants working in the neonatal units while at the district facility, we recruited nurses and clinicians as well as district health officers, district medical officers, district nursing officers who oversaw the delivery of health services in their region. We approached health workers in person and or by phone and asked for an interview after briefing them on the study. A sample size of 5-10 per site was estimated to reach data saturation based on the limited number of health workers at each of the neonatal units.

Data collection and analysis

Data collectors facilitated 30-60 minute in-person interviews within a secluded place at the health facilities between May and August 2019. Interviews were conducted in English or Chichewa, the major local language in Malawi following a semi-structured topic guide, which was piloted the interview guide with nurses at the central hospital to refine questions and to develop the coding framework for primary analysis. Interviews were recorded with permission, translated and transcribed verbatim. More information on the topic guide, methodology of data collection and primary analysis are reported elsewhere[34].

Secondary analysis of the qualitative dataset was conducted on NVivo 12 software (QSR International, Melbourne, Australia) using a thematic approach as developed by Braun and Clarke[35]. Empowerment themes emerged from health worker perceptions and attitudes around the value of KMC coded in the primary analysis[34], which underwent additional coding by MWK to specifically elucidate themes around the impact of KMC on health worker job satisfaction, their ability to provide care for low birthweight and preterm infants, and conceptualizations of their roles as health professionals. Coded transcripts and summaries of emergent themes were reviewed with SS and ALNM.

Results

Participant characteristics

Of the 27 health workers interviewed, nine (33%) were from the central hospital and 18 (67%) were from district hospitals. Fifteen (56%) were female and 12 (44%) were male. Half of the health workers were nurses (14, 52%). Additionally, we interviewed four clinical officers (15%), seven district health management including the district health officer, district medical officer and district nursing officer (26%) and two paediatricians/registrars (7%). Over one third of participants (10, 37%) had between 1-4 years of experience in their current position, while seven (26%) had 5-10 years, five (19%) had less than one year and five (19%) had more than 10 years of

experience in their current position. A significant portion of participants had over 10 years of experience as a health worker (11, 41%).

Capacity for newborn care and health worker self-efficacy

Health workers reflected that before implementing KMC in their facilities, low birthweight babies frequently did not survive. These newborns may have been placed under compassionate care within the nursery but there was a sense of hopelessness that the infant was destined to not survive.

> "The time there was no KMC, babies were just put in nursery ward [and] babies were dying…" Tertiary hospital nurse

> "We are not losing babies due to age, now we are able to save even babies weighing 900gm or 800gm, while in the past, it was as if someone has aborted." Tertiary hospital nurse

Health workers reported that practicing KMC gave them hope because it felt like there was something they could do to support survival of low birthweight infants. Gaining skills to facilitate KMC strengthened health worker capacity to counsel caregivers.

> "Before training, we were just managing the babies anyhow but then after training, we manage to save lives of babies…let's say a baby who is less than 1kg…. When we emphasized on kangaroo, we found that the survival rate increased, but before that we were not sure how to manage the babies who are now on kangaroo" District hospital nurse

> "It makes me feel good! Yes, it makes me feel that am taking part in improving the lives of these small babies. Uhh…you know, small baby, most of the times would bring feelings of maybe hopelessness to the mothers…yea…you find that maybe the mother is complaining, "I was expecting a big baby; now I have a small baby. Is this baby going to survive?" Ok, so with KMC… those concerns or those thoughts are minimized." District hospital clinical officer

Health workers shared a sense of increased competence in caring for low birthweight infants. Implementation of KMC at district hospitals reduced referral rates of small newborns to the tertiary hospital. There was a sense of pride expressed by district health professionals, including nurses, clinicians and management, around their ability to care for these infants locally.

> "With this initiation in *uhh* district hospitals, it has reduced quite a number of admissions or referrals… from district hospitals to the central (tertiary) hospital. Because in district hospitals, instead of sending the baby there, kangaroo starts here. The baby remains here…" District hospital clinical officer

> "…we have a little less number of people being referred to the central hospital. Most of them we are managing them here" District health officer

> "I think nowadays we are not doing many neonate referrals to the central hospital…We only refer on critical cases. Our health centers, they are able to send us cases, from health centers to here!" District hospital nurse

Job satisfaction

Health workers shared that high rates of death in nurseries was depressing and demoralizing, particularly for clinical front-line staff such as nurses, clinical officers and physicians. Subsequently, seeing babies survive with KMC was encouraging. They shared that KMC was a good intervention because it helped to save the lives of preterm and low birthweight infants. This in turn was associated with improved interactions and relationships with family members, both within the hospital setting as well as in the local communities.

> "Most babies that are normally supposed to die when put on kangaroo have been surviving and nine out of ten babies survive… A woman came and delivered a baby who was 1.2 kg and we enlightened the woman that the baby needed to be put on kangaroo and how to feed it, how to put it on her skin and she really followed. And after three weeks, the baby gained weight and weighed 2.6kg, which is a normal weight…which was a very exciting thing and the mother was happy as well!" District hospital nurse

> "What has improved is that deaths of premature babies have reduced, because now, the babies are growing up… Sometimes, when we go [for a] walk in the communities, we meet women…saying "Brother, the baby who weighed 1kg or 1 ½ kg is this one and you cannot even recognize him" or "Currently, he is at home and is running around!" So, that gives us evidence and encouragement that things are improving…. It has helped because our work has progressed because what happens is that when a baby dies in a ward, the health workers there are affected and demoralized. So, at the coming in of such methods of kangaroo mother care, the number of deaths is reducing. Also for us, when [a mother] comes to show us her baby, we are motivated. So, kangaroo mother care has helped us with our work, our work has been easy to carry out. Why easy to carry out? Because the number of deaths is reducing." District hospital nurse

Health workers reported that successes in helping to save the lives of low birthweight and preterm infants made them feel better about their jobs. They shared that it made them feel like they were doing a good job, even where essential equipment in neonatal units may be lacking. Some shared that witnessing successes increased pride and commitment to their work.

> "It has changed me a lot because I have seen a decrease in number of neonatal deaths. Previously, we used to refer patients…. We did not have the nursery, we did not have enough equipment… but, as of now, we are able to do it! We find that these babies are doing very fine. That's an encouragement that we are really doing a great job!" District hospital clinical officer

> "One time, there was a baby who was referred…who weighed 800gm and was on kangaroo. The mum lost hope that her 800gm baby will survive. She was even refusing to express milk but we convinced her then she started feeding the baby every two hours and the baby survived and now is in secondary school. That was the first baby we saved and made us the nurses and doctors to be proud of our job…. The mothers come to report and this makes us proud…This has helped us a lot in our job and even in spirit to be in love with our job." Tertiary hospital nurse

Making a difference

In addition to improved competency to help low birthweight babies survive, and greater job satisfaction, health workers interviewed shared that providing KMC supported a greater sense of purpose and ability to make an impact for women and society.

> "It feels great. I find pride in putting those babies on their mother's chest and teaching the mother how to do it and watching her gain confidence, it makes me feel like you are making a difference." Tertiary hospital nurse

> "You feel good! And when the mother come after being discharged to show us how their babies are, you feel proud, like works of our hands are giving testimony! *(laughs)* That means the work is fruitful." Tertiary hospital nurse

Some health workers reflected on how KMC started to change perspectives on preterm infants, who were traditionally seen as not fully human and could not survive. Increased rates of survival of low birthweight infants supported a shift to seeing preterm newborns as human beings, who were traditionally seen as not fully human and could not survive. Some reflected that the preterm infants they managed to save may grow up to be future leaders in Malawi.

> Reflecting on the impact of KMC on saving lives of preterm infant: "Now they know that a premature baby is also a human being" Tertiary hospital nurse

> "One of our goals as a health system is to reduce neonatal deaths. Premature and underweight babies contribute to the neonatal deaths and KMC is one of the interventions which has reduced these deaths… It helps babies who could have died to become even important members of the society." District health officer.

Discussion

A positive perception of KMC shared by nurses and other health workers highlighted increased capacity

to care for vulnerable low birthweight and preterm infants at their health facilities, which supported an improved sense of self-efficacy, job satisfaction and sense that they were making a difference in their communities. Witnessing low birthweight babies survive gave hope and meaning to their work. They reported feeling empowered by being able to provide effective care for small newborns, which supported workplace morale and strengthened commitment to their jobs.

Within the context in Malawi where hospitals are challenged by high neonatal mortality rates[26], serious staffing shortages[27] and documented high rates of burnout have been reported especially with health workers in the maternity wards[28], KMC was especially meaningful to frontline medical staff. Some health management commented on being proud of increased capacities and performance of their district health facilities. However, it was largely from nurses and clinical officers from resource-limited rural district hospitals who shared visceral narratives of witnessing and supporting small newborns survive, interacting with family members and the joys of seeing the children grow up in the community. This underlines the heavy emotional toll of frontline work at hospitals in Malawi, which receives more high-risk pregnancies and complicated deliveries and reports a significantly higher neonatal mortality rate than health centres in Malawi[26].

Previous research suggests the potential for power struggles as KMC shifts power and the primary responsibility for care to caregivers[36]. However, this may not be the case in resource-limited health settings, such as the Malawian newborn units included in the current study. Within the context of staffing constraints, health workers highlighted that increased capacity to provide effective care for small newborns strengthened their ability to counsel and relate to caregivers and suggested that KMC practice may strengthen their relationships with family members. The narratives of hope, increased self-efficacy, feeling proud of their work, and sense of purpose health workers shared in relation to supporting KMC practice at their health facilities are a counterpoint to the high rates of emotional exhaustion, depersonalization and reduced personal accomplishment that have been reported as key elements of burn-out among health care providers in Malawi[28,37]. Consequently, expanding from conceptualizing empowerment as a zero-sum game where increasing capabilities and confidence in caregivers may disempower health workers, participants in our study suggest that KMC can strengthen health worker empowerment alongside caregivers.

However, while empowerment may help mitigate health worker burnout, it is not a complete solution in resource-constrained health settings. A recent review found that health infrastructure improvements is essential to reducing health worker burnout in sub-Saharan Africa, which was associated with heavy workloads, inadequate number of nursing personnel, frequent night duties, poor wages, as well as organizational complaints, conflicts and lack of support[38]. KMC wards in Malawi may be neglected as health workers perceived KMC infants to be in good health and understaffing led to their prioritization for infants in critical care[34]. This relates to minimal interaction observed between health workers and family members in Malawian KMC wards beyond initial counseling upon admission and clinical check-ups for infants[39]. Ironically, while shared as potentially empowering for health workers, who felt more capable and confident in counselling mothers and their families on how to care of preterm and low birthweight infants, the burden was shifted onto mothers and her support network. Quotes included in the results highlight the role of health workers to instruct mothers on how to practice KMC but suggests that success of the intervention may depend on her ability to follow instructions. Interviews with family members have highlighted the heavy burden on hospital admission of KMC on households as it disrupts responsibilities at home and livelihood activities, which lead to self-discharge before medically recommended[39]. Consequently, implementing routine KMC may be empowering for health workers in resource-limited health settings but the association between KMC and mothers' empowerment may be more complicated than it first seems.

A limitation of this study is that it is a secondary analysis of data. The primary objective that guided the data collection tools was to explore the barriers and facilitators to implementation of KMC at Malawian hospitals. Consequently, we did not include explicit questions on empowerment, self-efficacy, confidence and job satisfaction, and this may limit our dataset. Additionally, study findings may be limited by the specificity of the research setting as we elicited perspectives from health workers within Malawian hospitals, which

may limit transferability of the study. However, a strength of the study is that it elicited perspectives from a wide range of health workers in Malawian hospitals that were purposefully sampled and the semi-structured interviewing approach that allowed flexibility for emergent issues that participants felt were important. To the best of our knowledge, this is the first study investigating health worker empowerment in association with KMC in resource-limited settings and further research is needed to confirm our exploratory findings in other contexts.

Ethical considerations

The research received ethics approval from the University of Malawi College of Medicine (P.08/15/1783) and the University of British Columbia (H15-01463-A003). Participants provided written informed consent prior to research activities and reported narratives are de-identified to protect confidentiality

Conclusion

Health worker burnout is a serious concern in resource-constrained settings where there may be staffing shortages, heavy burdens of work and high rates of mortality and morbidities. Health worker buy-in and engagement is often key to implementation of health innovations, such as KMC in Malawi where the practice has been official policy for over a decade but scale-up has been a challenge. While maternal empowerment and strengthening attachment between mother and newborn has been widely reported as a key benefit of KMC, KMC may also support the empowerment of health workers. Faced with high rates of newborn deaths within neonatal units, KMC helped health workers feel like they were able to make a difference and strengthened resilience in their work.

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Availability of data and materials

The datasets generated and/or analyzed during the current study are not publicly available due to participant privacy but are available from the corresponding author on reasonable request.

Contribution of authors

MWK contributed to methods, data analysis, and interpretation and drafted the original paper. SS contributed to the investigation and data analysis and MB was the project administrator. KP, MV and EAM reviewed all version of the paper and contributed on the interpretation and the structure of the paper. LN, QD, DMG and KK contributed to the conceptualization of the research project and its funding acquisition and reviewed all versions. ALNM led the qualitative component of the project and developed the methodology and supervised the investigation, data analysis, and reviewed all versions. All authors have read and approved the manuscript.

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