

Using A Global Health Media Project Video To Increase Knowledge And Confidence In The Mothers Of Admitted Neonates In Rwanda – A Prospective Interventional Study

Authors: Richard Arinitwe^{1,3}; Alice Willson^{2,3}; Sean Batenhorst⁴; Peter Cartledge^{3,5}

Affiliations: 1 University of Rwanda; 2 Royal College of Paediatrics and Child Health, UNICEF neonatal programme, Kigali, Rwanda; 3 University Teaching Hospital of Kigali (CHUK); 4 University of Wyoming, Laramie, Wyoming; 5 Yale University, Rwanda Human Resources for Health (HRH) Program, Rwanda;

Abstract

Background: In many resource-limited settings, the ratio of trained healthcare professionals to neonates is low. Parents are therefore frequently required to provide primary neonatal care to their admitted newborns. In order to undertake such Family Integrated Care (FiCare) safely, parents require confidence and effective education. The evolution and availability of technology has resulted in video education becoming more readily available in this setting.

Aim: This study aimed to investigate whether showing a short Global Health Media Project (GHMP) video on a specific neonatal topic could change the knowledge and confidence of mothers of admitted neonates.

Methods: A prospective interventional study was conducted in two hospitals in Kigali, Rwanda. Mothers of admitted neonates at a teaching hospital and a district hospital were invited to participate. Fifty-nine mothers met the inclusion criteria (Figure 1). Participants were shown 'Increasing Your Milk Supply, for mothers' a seven-minute GHMP video in the local language of Kinyarwanda. Before and after watching the video, mothers completed a Likert-based questionnaire which assessed knowledge and confidence on the subject (Figure 2).

Results: Composite Likert scores showed a statistically significant increase in knowledge (pre=27.2, post=33.2, p<0.001) and confidence (pre=9.7, post=14.2, p<0.001). Satisfaction levels were high regarding the video content, language, and quality (Figure 3, Figure 4). However, only 10% of mothers owned a smartphone.

Conclusion: We have shown that maternal knowledge and confidence on a specific neonatal topic can be increased through the use of a short GHMP video. As we move beyond child survival, aiming for a holistic approach to neonatal care, new strategies, such as video technology, should be employed to empower parents to better care for their admitted newborns.

Methods and Materials

Figure 1: Participants

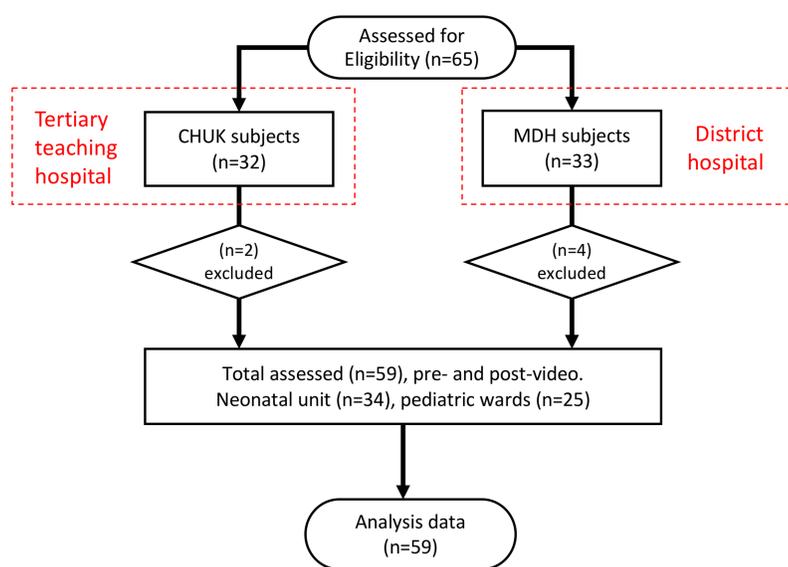
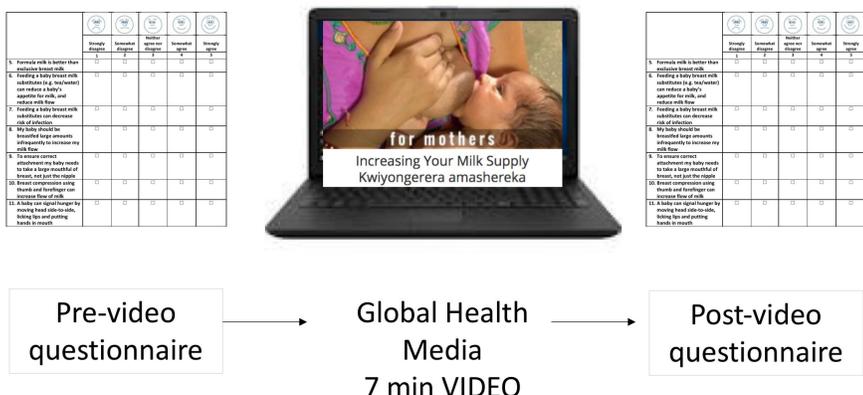


Figure 2: Intervention and measurement



Results

Table 1: Change in knowledge

	Pre-video mean (±SD)	Post-video mean (±SD)	Difference (CI)	p-value
Total Knowledge score	27.20 (±4.06)	33.24 (±2.96)	6.03 (CI :4.80 to 7.27)	p<0.001
Total confidence score	9.69 (±2.61)	14.24 (±2.02)	4.54 (CI: 3.64 to 5.45)	p<0.001

Likert scale: 1=strongly disagree, 2= disagree, 3= neither agree nor disagree, 4= agree, 5=strongly agree
*R*Reverse coded Likert questions: 5=strongly disagree, 4= disagree, 3= neither agree nor disagree, 2= agree, 1=strongly agree.

Figure 3: Change in knowledge

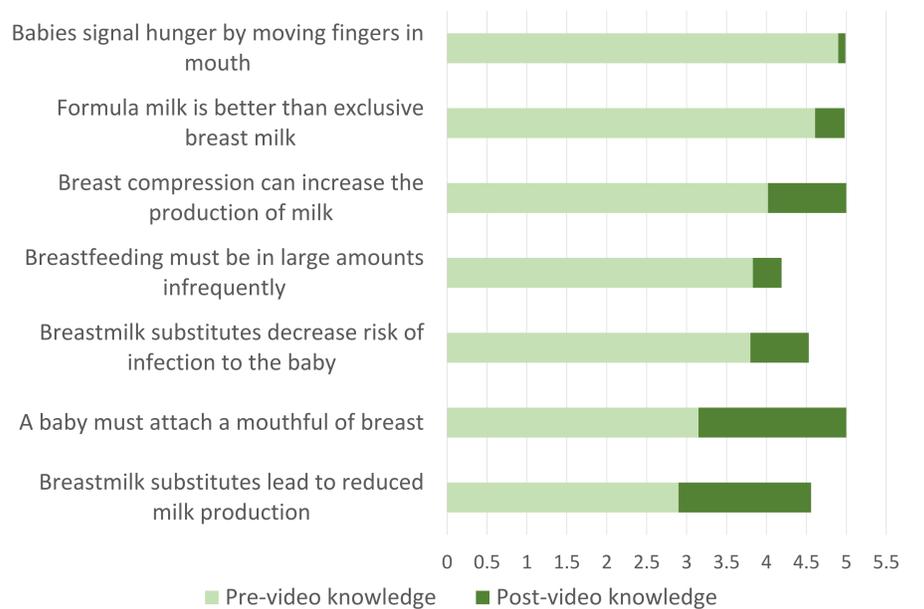


Figure 4: Change in confidence



Table 2: Satisfaction

	Mean (±SD)
The video was too long	1.15 (±0.74)
I could hear the voice clearly	5.00 (±0.00)
I understood the video	4.93 (±0.37)
I enjoyed watching the video	5.00 (±0.00)

Likert scale: 1=strongly disagree, 2= disagree, 3= neither agree nor disagree, 4= agree, 5=strongly agree

Take Home Message

- The results revealed an improvement in knowledge and confidence of the participants after watching the Global Health Media video.
- Video education for caregiver education can be very practical in settings with low ratio of HCPs