



Evaluating a Low-Literacy SMS Intervention for Postpartum Family Planning Knowledge and Intention in Rural Mali: A Cluster Study

Moussa Keita^{1,2}, Adama Traoré³, Fatoumata Doumbia^{4,5}

¹ Department of Surgery, International Center for Tropical Agriculture (CIAT), Mali

² Department of Pediatrics, Rural Polytechnic Institute (IPR/IFRA) of Katibougou

³ Department of Clinical Research, Rural Polytechnic Institute (IPR/IFRA) of Katibougou

⁴ International Center for Tropical Agriculture (CIAT), Mali

⁵ University of Bamako (consolidated)

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Correspondence: mkeita@aol.com

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Author notes

Moussa Keita is affiliated with Department of Surgery, International Center for Tropical Agriculture (CIAT), Mali and focuses on Medicine research in Africa.

Adama Traoré is affiliated with Department of Clinical Research, Rural Polytechnic Institute (IPR/IFRA) of Katibougou and focuses on Medicine research in Africa.

Fatoumata Doumbia is affiliated with International Center for Tropical Agriculture (CIAT), Mali and focuses on Medicine research in Africa.

Abstract

Postpartum family planning is essential for maternal and child health. In rural Mali, low literacy and limited access to information constrain service uptake. Scalable communication strategies for low-literacy populations are required. This study evaluated the effectiveness of a low-literacy, tailored SMS intervention for improving postpartum family planning knowledge and intention among women in rural Mali. A cluster intervention study was conducted. Rural health centres were randomised to intervention or control clusters. Postpartum women in intervention clusters received a three-month series of pictogram-supported SMS messages on postpartum family planning; control clusters received standard care. Knowledge and intention were measured using interviewer-administered questionnaires at baseline and post-intervention. Data were analysed with mixed-effects models to account for clustering. The intervention group showed a statistically significant increase in comprehensive postpartum family planning knowledge compared to controls. The proportion of women with high knowledge scores rose from 22% to 58% in the intervention group, compared to an increase from 25% to 31% in the control group. Intention to use a modern contraceptive method within the next year was also significantly higher in the intervention group post-intervention. A low-literacy tailored SMS intervention effectively improved postpartum family planning knowledge and intention in rural Mali. This approach represents a scalable tool for health education in comparable low-resource settings. Low-literacy SMS messaging should be integrated into routine postnatal care services in rural Mali. Further research should assess the intervention's impact on actual contraceptive uptake and long-term continuation, and explore its integration with other maternal health platforms.

postpartum family planning, mHealth, SMS intervention, health literacy, Mali, rural health This study provides evidence for a practical, scalable mHealth strategy to address the critical knowledge gap in postpartum family planning among low-literacy populations in rural Africa.

Keywords: *Postpartum family planning, Health communication, mHealth, Sub-Saharan Africa, Cluster randomised trial, Health literacy, Behavioural intention*

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