

博士論文（要約）

The effectiveness of a behavioral science and design intervention for family savings on increased use of maternal health services and male involvement: a randomized controlled trial

(ウガンダにおける家計貯蓄・行動デザイン介入による母子保健サービス利用率及び配偶者関与への効果：ランダム化比較試験)

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Abstract

Introduction

Lack of financial preparedness for pregnancy can lead to adverse outcomes during childbirth. Behavioral science interventions have been shown to influence savings behavior. Financial savings interventions can be adapted for the purpose of encouraging individuals to save towards maternal healthcare costs. I assessed the effectiveness of an intervention formulated with a behavioral science approach on the use of maternal health services through increased savings for birth preparedness and maternal healthcare costs among pregnant women or their partners in Kampala and Wakiso districts in the central region of Uganda.

Methods

I conducted a randomized controlled trial between June 1 – December 1, 2022. Two hundred ninety-three (293) pregnant women and 90 men were recruited during the pregnancy period (12-35 gestational weeks) for an intervention period of 2-6 months depending on gestational weeks at enrollment. Both intervention and control group participants received access to a committed mobile money health savings account provided by a local organization that also offers savings targets, reminders for antenatal care appointments, and health tips. In addition, the intervention group received behavioral designs encouraging savings behavior through short-message service text messages from the day of enrollment until two weeks after the delivery date. The primary outcomes were (1) usage of maternal health services, measured by level of birth preparedness and skilled birth attendance and delivery at a health facility, and (2) expenditures on healthcare, assessed using the validated amount of withdrawals in participants' accounts at the end of the intervention period. Secondary outcomes included male involvement in maternal healthcare and total savings for healthcare. Mixed-effect generalized linear models based on Poisson distribution

and generalized linear models based on Poisson and Gaussian distributions were used to examine the effects of the intervention.

Results

Among 180 total participants (87: intervention, 93: control) who completed the endline survey by December 2022, more participants in the intervention group completed four or more ANC visits by delivery (RR = 1.95, 95% CI 0.65 – 5.87) than those in the control group. The percentage of intervention participants who exercised a high male involvement was higher in the intervention by 10% over the control group, adjusted for baseline level (RR = 1.10, 95% CI 0.60 – 2.03). Deposits over 100,000 UGX (approximately 28.50 USD) were higher by 12% in the intervention group over the control group (RR = 1.12, CI 0.68 – 1.86).

Conclusion

There was no evidence of the behaviorally informed messaging intervention in improving ANC attendance completion, male involvement in maternal healthcare, and savings for maternal healthcare among pregnant women or their partners in Kampala District, Uganda, though there was a positive tendency. There was also no evidence of the behaviorally informed messaging intervention was not effective in improving birth preparedness and financial savings for healthcare costs. With further research and caution, the behavioral science approach could be a potential option to promote other behavioral changes that incorporate mobile money savings accounts towards healthcare in SSA.

Keywords

Maternal health service, Healthcare cost, Pregnancy, Antenatal care, Birth preparedness, Male involvement, Behavior change, Mobile Money, Savings, Global health