



## RESEARCH INSIGHTS

### mHealth Service in Kenya Increases Knowledge of Family Planning

A randomized controlled trial in Kenya found that a mobile messaging service significantly improved knowledge of family planning among consumers. However, the service did not change contraceptive use or other behavior. The study showed that SMS can be an effective data collection tool to assess program outcomes.

Despite decades of international family planning programming, there is still a high level of unmet need in many developing countries. In Kenya, many people do not use contraception because of misconceptions and concerns about side effects. This suggests that new approaches are needed to disseminate accurate family planning information.

The Mobiles for Reproductive Health (m4RH) service took advantage of the many mobile phones in Kenya to communicate family planning information through a mobile messaging service at a low cost. Consumers accessed the service via SMS requests. Once they sent an initial request to access the service, they were able to ask for information on family planning methods and clinic locations. The service aimed to increase knowledge of family planning and to improve behaviors regarding communication between partners, adoption of contraceptives, and use of related health services.

#### Methods

Researchers from the SHOPS project randomly assigned all new phone numbers that attempted to access the m4RH service within the 90-day study period to a treatment or control group. Consumers in the treatment group received full access to the m4RH service, while members of the control group only had access to general health information about family planning benefits, healthy living, and sexual health, as well as clinic locations. The control group received full access at the conclusion of the study.

The research team used SMS to conduct three waves of data collection. Team members sent short questions to users to determine their demographics, contraceptive use and other family planning behaviors, and knowledge of family planning. Participants responded to these questions via SMS. The team used this data to evaluate the effect of the service on consumers' family planning knowledge and behavior.



United Nations Development Program

*The Mobiles for Reproductive Health service aimed to increase knowledge of family planning. Users could request information through SMS.*

#### Key Findings

- m4RH led to a 13 percent increase in family planning knowledge among consumers.
- m4RH did not lead to significant changes in consumers' family planning behavior.
- Consumers in the treatment and control groups were more educated and more likely to use contraceptives than the general population.
- SMS can be an effective, low-cost data collection tool to assess program outcomes.

## Findings

### m4RH led to a 13 percent increase in family planning knowledge among consumers.

As shown in Figure 1, the study found that having full access to the m4RH service substantially increased consumers' knowledge of family planning. Consumers in the treatment group, who had full access to the m4RH service, correctly answered an average of 2.19 out of 5 knowledge questions. Consumers in the control group correctly answered an average of 1.93 questions.

### m4RH did not lead to significant changes in consumers' family planning behavior.

The study assessed the effect of m4RH on three behavioral outcomes: whether the consumer recently discussed family planning with his or her partner, whether the consumer visited a clinic to discuss family planning in the past month, and whether the consumer or the consumer's partner used contraception. Despite increased family planning knowledge in the treatment group, there was no detectable difference in family planning behaviors between the treatment and control groups (Figure 2).

Figure 1. m4RH increased consumers' knowledge of family planning

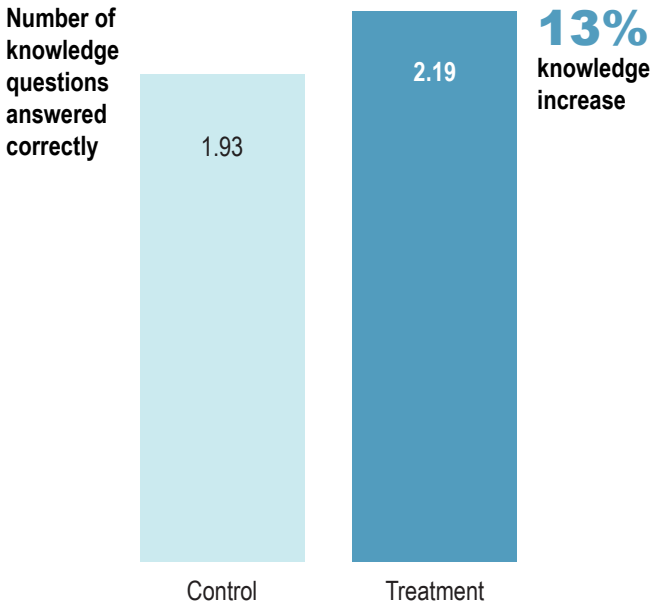
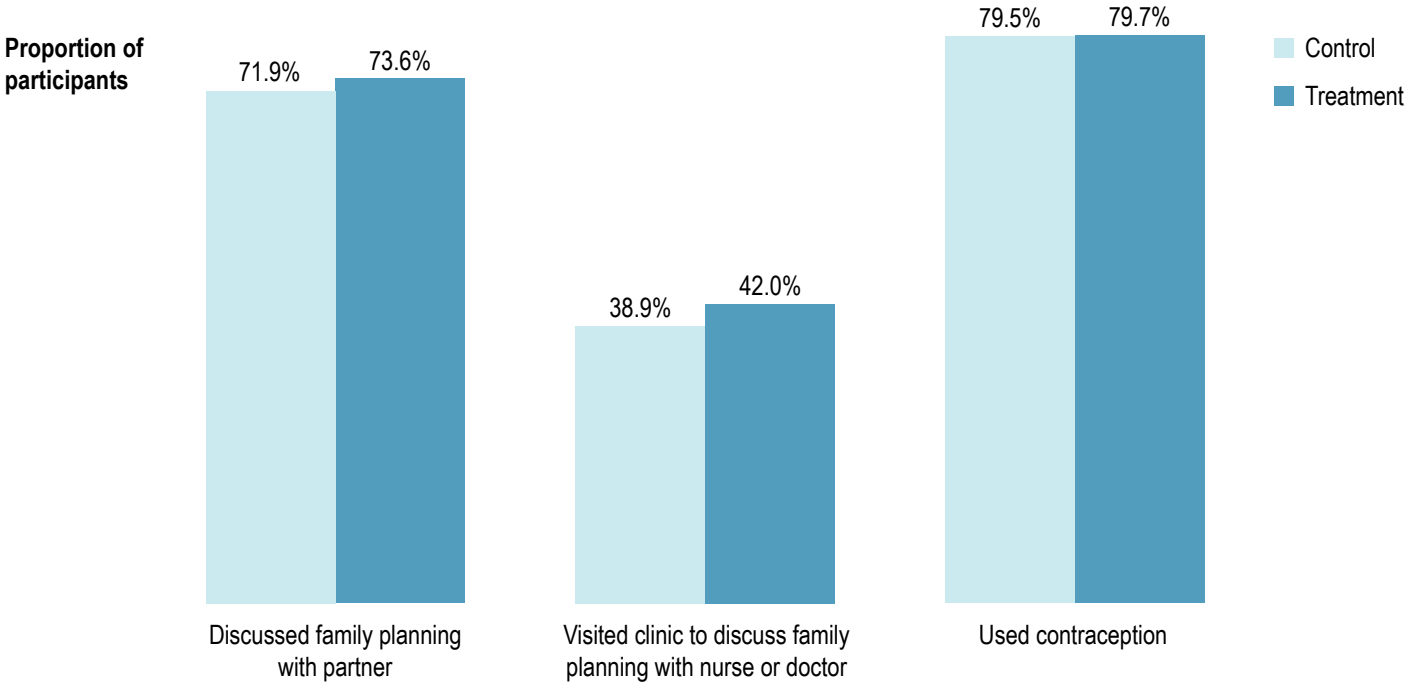


Figure 2. m4RH did not change family planning behavior



Note: Researchers assigned 6,817 individuals to the treatment group and 6,812 to the control group. The number of study participants who responded to each survey question varied widely.



**Consumers in the treatment and control groups were more educated and more likely to use contraceptives than the general population.** m4RH consumers across the treatment and control groups were young, with an average age of 25, and highly educated (90 percent had a secondary education). Seventy percent of study participants were already using contraception when they first accessed the m4RH service, which is a higher proportion of contraceptive users than in the general population. An estimated 58 percent of women and 67 percent of men in Kenya have used contraception.

**SMS can be an effective, low-cost data collection tool to assess program outcomes.** The SHOPS team collected data for this study solely through SMS, a low-cost alternative to face-to-face interviews. While the response rate was lower than that of a traditional, face-to-face survey, the response rate between the treatment and control groups was similar. This suggests that results were not compromised by non-response bias.\*

Consumers used the free m4RH service to obtain information about family planning methods, reproductive health, and clinic locations.

\* Non-response bias occurs when data from respondents differ from the potential data of those who did not answer.



Community health workers were the main channel for promoting the m4RH service in health clinics.

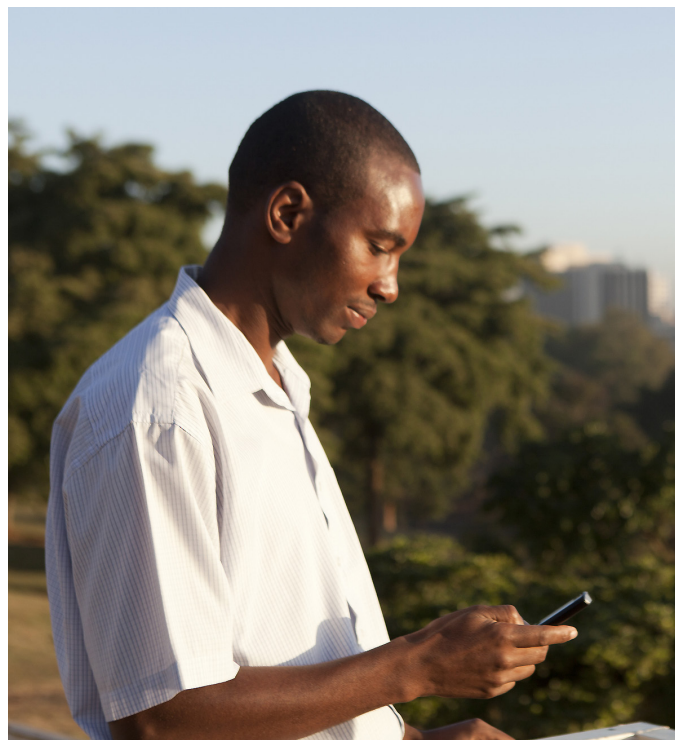


## Program Implications

**Mobile technology has the potential to improve knowledge about family planning in developing countries.** While the m4RH service did not improve consumers' family planning behavior, the increase in consumer knowledge is encouraging. The results of this study support continued investment in mobile behavior change interventions to increase knowledge about family planning.

**SMS as a standalone intervention may be insufficient to change family planning behavior.** The study did not find that use of the service influenced contraceptive use or other family planning behaviors. Future programs should experiment with integrating SMS interventions into multifaceted approaches. The frequency and types of SMS information provided by such a service may also have an effect on response; future programs should test whether changing the amount of information delivered via SMS can improve behavioral outcomes.

**Future programs should target non-users of contraception and underserved populations.** Another possible reason why the service did not lead to behavior change is that consumers of the m4RH service were already using contraception at a higher rate than the general population. This may be because the service was primarily advertised at health care clinics. It will be important for future programs to target underserved populations with a higher unmet need for family planning. They could do this through promotional channels that reach beyond clinics to locations where contraceptive use is known to be low and by screening future study populations to include only non-users of family planning.



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**SMS has potential as a data collection tool to measure outcomes.** This study employed data from an SMS-only survey without compromising the ability to draw meaningful conclusions. Given the relatively low cost of SMS data collection compared to traditional face-to-face interviewing, employing this data collection method more broadly could help to increase the volume of research in mhealth and other areas in developing countries.

**Full report**  
This summary is based on research conducted by the SHOPS project. For more information, contact [info@shopsproject.org](mailto:info@shopsproject.org).

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For more information about the SHOPS project, visit: [www.shopsproject.org](http://www.shopsproject.org)



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