

The Use of Text Message Reminders to Promote Parent Participation in the Farm to Family (F2F) Program

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BACKGROUND

Farm to Family

- Nationally, 12.1% of preschool aged children are obese, with even higher rates for low-income (14.1%), Black (18.9%) and Hispanic (16.2%) children (Ogden et al., 2012)
- Families living in poverty often experience limited access to fewer chain supermarkets (Powell et al., 2007) and affordable and healthy food options (Krukowski et al., 2010).
- Farm to Family (F2F), is a subsidized Community Supported Agriculture (CSA) model that provides Head Start families access to low-cost, fresh, locally grown food. Head Start is the nation's largest federally-funded education program for low-income preschoolers.
- F2F is offered to Head Start families and staff, who pick up weekly farm shares that are delivered to the Head Start program.
- During F2F's pilot year, farm share pick up rates were 74% for parents, compared to 97% for staff members (Hoffman et al., 2012).



Picture 1: Farm share bag Picture 2: Farm share contents

Text Message Reminders within Health Care

- Text message reminders have increased clinical attendance rates by 50% (Guy et al., 2012), as well as increased adherence to medication (Pop-Eleches et al., 2011; Vervloet et al., 2012).
- Personalized and interactive text messages may be a preferable form of communication (Ahlers-Schmidt et al., 2011; de Niet et al., 2012).
- Periodic text messages may be sufficient in effectively promoting health behaviors (Wantland, Bewick, Palermo, Fry, & Neff, 2009).

PURPOSE OF STUDY

- The main aim was to investigate the effect of text message reminders on parents' sustained engagement and pick up rates in the F2F program.
- The secondary aim was to explore other logistical factors that served to encourage or discourage participants from picking up their weekly farm shares.

METHODS

Setting & Participants

- F2F was implemented at 10 community sites in Boston, MA.
- Evaluation was conducted at 5 Head Start sites between July-October 2012.
- 51 families participated in the study.
- All participants were parents of Head Start children.

Study Design & Text Message Intervention

- Two group randomized design (i.e., Text Message Group= 25; No Text Message Group= 26).
- Weekly text message reminders were sent to participants.
- Semi-Structured Interviews were conducted with Site Coordinators (Head Start staff who assist with on-site program implementation) following F2F programming.

Data Analysis

- The study analyzed participant pick up rates across 16 weeks.
- Dependent Variables:** Farm Share Picked Up vs. Farm Share Not Picked Up; Farm Share Picked Up On Time vs. Farm Share Not Picked Up On Time.
- Independent Variable:** Group Status (i.e., Text Message Group vs. Control).
- Overall group differences were evaluated with a series of chi-square tests.
- Possible group differences manifesting over time were evaluated using GEE modeling.
- Semi-structured interviews with Site Coordinators were recorded and transcripts were analyzed.

RESULTS

	Overall and On-Time Pick Up Rates by Group		
	Text Message Group	No Text Message Group	All Participants
Overall Pick Up	.96	.92	.94
On-Time Pick Up	.68	.61	.64

TABLE 1. The on-time pick up rates for the text message group were slightly higher than the pick up rates for the no text message group. However, on-time pick up rates did not differ according to group, $\chi^2(1, N=51) = 2.79, p = .09$.

Parameter	Group Differences in Overall and On-Time Pick Up Across Programming			
	Overall Pick Up		On-Time Pick Up	
	β	Sig.	β	Sig.
Intercept	-2.69	.00	-.58	.09
Group	.14	.84	.42	.31
Time	-.06	.44	-.03	.45
Group * Time	.08	.41	-.02	.67

TABLE 2. Results from Wald's test of model effects suggest that group, time in the program, and the interaction between time in the program and group did not contribute to the rate of overall pick up and on-time pick-up.

RESULTS (cont.)

Feedback from Site Coordinators

	Site 1	Site 2	Site 3	Site 4
Difficulty of implementing F2F (1-easy to 5-difficult)	1	3	2	2
Hours spent on F2F per week	2	6	3.5	2

- Challenges: Recruiting families during summer, tracking/recording the different forms of payment, and making sure people physically picked up their boxes.
- Site Coordinators reported utilizing a variety of strategies to remind families.
- Site Coordinators supported continued use of text message reminders.

SUMMARY

- On-time pick up rates were substantially lower than overall pick up rates; overall pick up rates were very high.
- Text message reminders did not appear to significantly influence pick up rates, although the trend for on-time pick up was in the expected direction.
- The high pick up rates may be due to Site Coordinators' considerable efforts contacting participants on the day before, day of, and day after drop off.
- These rates are reflective of F2F's successful family engagement, and may also be an indicator of program success and acceptance among participants.
- Despite the overall success, Site Coordinators reported often having to expend considerable effort to track down families.
- Site Coordinator feedback and participant survey responses suggested that text message reminders were a helpful component of F2F programming.
- Considering the ease and practicality of implementing a text message reminder system, it remains a viable option for future use.

LIMITATIONS AND FUTURE DIRECTIONS

- Inconsistent fidelity to study procedures; Site Coordinators reported utilizing a variety of strategies across sites to remind families about pick ups.
- Lack of fidelity limits the ability to draw meaningful conclusions about effectiveness of text message reminders.
- Future studies should explore parents' perspectives on picking up farm shares at their child's Head Start site and barriers to picking up farm shares at a specific day and time.
- It is important to continue exploring how text messages can be used in childhood obesity prevention programs to promote healthy behaviors and/or increase adherence to a program.

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