Registry of Efficacy and Effectiveness Studies

Study Title:
Evaluation of Mobile Messaging on Responsive Caregiving: Consejos de Univision Study

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Section I: General Study Information

PI name: Elisa Garcia
PI affiliation: SRI International

Co-PI name: Sarah Gerard
Co-PI affiliation: SRI International

Co-PI name: Todd Grindal
Co-PI affiliation: SRI International

Co-PI name: Claire Christensen
Co-PI affiliation: SRI International

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5/18/21

Study End Date:
2/28/2022

Intervention Start Date:
5/18/21

Timing of entry:
Prior to collection of outcome data

Brief Abstract:
The Mobile Messaging on Responsive Caregiving study will evaluate the impact of two mobile messaging programs intended to improve responsive caregiving, attitudes, knowledge, and confidence of parents of young children. The study's primary goal is to build the evidence base on the use of mobile messaging-based behavioral interventions as a support for parents of young children. To examine the impacts of two mobile messaging programs on parent outcomes, we will conduct one experimental study of mobile messages provided by Bright By Text and one quasi-experimental study of mobile messages provided by the Consejos de Univision program. Outcomes will be measured using parent pre- and post- intervention surveys.

This entry describes the quasi-experimental study of Spanish language mobile messages provided by the Consejos de Univision program (Consejos), a partnership between Univision and Too Small To Fail. SRI will recruit up to 550 Spanish-speaking parents: 250 in the treatment group and 300 in the comparison group, to allow for the higher likelihood of attrition in the comparison group. Potential study participants will be offered a financial incentive of $50 to participate in the study. To recruit the treatment group, as parents enroll in Consejos text messages during the study recruitment period, Univision will invite parents with children in the eligible age range to participate in the study by following a link to an SRI online consent form and baseline survey. To recruit the comparison group, Univision will invite parents to participate via posts on Univision's social media channels. To participate in the study, parents in both groups must have an 18- to 36-month-old child, must not already be receiving text messages from Consejos, and must complete the baseline survey. The treatment group will receive typical messages from Univision for 12 weeks. The comparison group will receive no messages during the study. Parents in both groups may opt out of the study at any time, and parents in the treatment group may opt out of receiving messages at any time. We will invite all participants (treatment and comparison) to complete a second brief survey via mobile phone twelve weeks after they enrolled in the study. Parents in the comparison group will then be offered the full Consejos mobile messaging program, and parents in the treatment group will continue to receive messages as desired.

Keywords:
Quasi-experiment, QED, Quantitative, Parenting, Early childhood, Mobile messaging

Comments:
-

Section II starts on the next page.

Section II: Description of Study

Type of Intervention:
Curriculum/Product, Mobile messaging program for parents

Topic Area of Intervention:
Early Childhood Education, Education Technology, Parenting

Number of intervention arms:
1

Target school level:
18-36 months

Target school type:
National recruitment

Location of Implementation:
United States

Further description of location:
Recruitment will be conducted in the United States only and will not be localized to any states or regions. Univision uses national (e.g., social media, television) approaches to recruit parents to receive text messages. These parents may be invited to participate in the study if they sign up for text messages during the recruitment window and meet eligibility criteria.

Brief Description of Intervention Condition:
The treatment group will receive typical Spanish language messages from Consejos de Univision for 12 weeks. The Consejos de Univision program is a partnership between Univision and Too Small To Fail. Parents in both groups may opt out of the study at any time, and parents in the treatment group may opt out of receiving messages at any time.

Brief Description of Comparison Condition:
Parents assigned to the comparison group will not receive text messages during the study. Parents in both groups may opt out of the study at any time. We will invite all participants (treatment and comparison) to complete a second brief survey via mobile phone 12 weeks after they enrolled in the study. Parents assigned to the comparison group will then be offered the full Consejos de Univision mobile messaging program.

Comparison condition:
Other

Comments:
Participants in the comparison group will receive delayed treatment after collection of outcome measures.

Section III: Research Questions

Confirmatory research questions:

Question 1:
Does providing 12 weeks of access to the Consejos de Univision mobile messaging program improve responsive caregiving among parents of children ages 18 to 36 months, as compared to business as usual?

Question 2:
Does providing 12 weeks of access to the Consejos de Univision mobile messaging program improve parenting attitudes among parents of children ages 18 to 36 months, as compared to business as usual?

Question 3:
Does providing 12 weeks of access to the Consejos de Univision mobile messaging program improve parenting knowledge among parents of children ages 18 to 36 months, as compared to business as usual?

Question 4:
Does providing 12 weeks of access to the Consejos de Univision mobile messaging program improve confidence in parenting among parents of children ages 18 to 36 months, as compared to business as usual?

Exploratory research questions:
Question 1:
How does the impact of providing 12 weeks of access to the Consejos de Univision mobile messaging program on responsive caregiving among parents of children ages 18 to 36 months vary by demographic variables?

Question 2:
How does the impact of providing 12 weeks of access to the Consejos de Univision mobile messaging program on parenting attitudes among parents of children ages 18 to 36 months vary by demographic variables?

Question 3:
How does the impact of providing 12 weeks of access to the Consejos de Univision mobile messaging program on parenting knowledge among parents of children ages 18 to 36 months vary by demographic variables?

Question 4:
How does the impact of providing 12 weeks of access to the Consejos de Univision mobile messaging program on confidence in parenting, among parents of children ages 18 to 36 months vary by demographic variables?

Comments:
-

Section IV-A: Study Design (Selection)

Study Design:
Quasi-experimental Design with comparison group (QED)

Comments:
-

Section IV-B: Study Design (Input)

Study Design: Input

Unit of intervention implementation:
Parent

Assignment within sites or blocks:
No

Unit outcome data measured::
Parent

Intermediate clusters between unit of implementation and unit of measurement:
No

Study Design: Matching Procedures

Covariates used to select comparison:
-, Baseline measures, Parent education, Parent income

Distance measure used for matching treatment and comparison:
Propensity Score

Matching method used:
Weighting Adjustment

Matching ratio (treatment : comparison):
We will use all treatment and comparison cases. Treatment parents will get a weight of 1. Comparison parents will get a weight of p/(1-p).

Comments:
Participants will not be randomly assigned to condition. They will participate in the condition they signed up for. Parents in the treatment group will be recruited through typical means of recruiting text message recipients for the Consejos text messaging program – primarily social media ads and television announcements. Participants in the comparison group will be recruited through social media ads for the study.

Design Classification

Based on the responses above, this study has been classified as:
QED: 1-level

Section V: Sample Characteristics

Approximate number of outcome data units (Parent) in the comparision condition: 300

Approximate number of outcome data units (Parent) in the intervention condition: 250

Were there certain outcome data units (Parent) that were targeted for the study?
Yes - For both the treatment and comparison group we will target Spanish-speaking parents who have a child ages 18-36 months. For the treatment group we will target parents who sign up to receive Consejos mobile messages.

Were there certain outcome data units (Parent) that were excluded from the study?
Yes - Our sample will include only parents who meet these criteria: (1) Parents in the treatment group must register a phone number to receive Consejos messages at the time of study enrollment. They must not have previously been enrolled in Consejos mobile messages. (2) Parents in both the treatment and comparison condition must have a child who is 18 to 36 months old. (3) Only one parent per household is eligible to participate. (4) Parents must complete the baseline survey to participate.

Comments:
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Section VI: Outcomes (Input)

Confirmatory question 1: Outcome Measure 1

Outcome domain: Other Outcome Domain - Responsive caregiving: a caregiving style that includes serve-and-return interactions, positive affect, and rich and varied language inputs.

Minimum detectable effect size: .18 to .24

Outcome measure: Responsive caregiving: Serve and Return Interaction Scale

Scale of outcome measure: Ordinal

Normed or state test: No

Test-retest reliability: N/A

Internal consistency: N/A

Inter-rater reliability: N/A

Same outcome measure in treatment and comparison groups: Yes

Confirmatory question 1: Outcome Measure 2

Outcome domain: Other Outcome Domain - Responsive caregiving: a caregiving style that includes serve-and-return interactions, positive affect, and rich and varied language inputs.

Minimum detectable effect size: .18 to .24

Outcome measure: Responsive caregiving: Positive affect scale

Scale of outcome measure: Ordinal

Normed or state test: No

Test-retest reliability: N/A

Internal consistency: N/A

Inter-rater reliability: N/A

Same outcome measure in treatment and comparison groups: Yes

Confirmatory question 1: Outcome Measure 3

Outcome domain: Other Outcome Domain - Responsive caregiving: a caregiving style that includes serve-and-return interactions, positive affect, and rich and varied language inputs.

Minimum detectable effect size: .18 to .24

Outcome measure: Responsive caregiving: Frequency of reading

Scale of outcome measure: Continuous

Normed or state test: No

Test-retest reliability: N/A

Internal consistency: N/A

Inter-rater reliability: N/A

Same outcome measure in treatment and comparison groups: Yes

Confirmatory question 1: Outcome Measure 4

Outcome domain: Other Outcome Domain - Responsive caregiving: a caregiving style that includes serve-and-return interactions, positive affect, and rich and varied language inputs.

Minimum detectable effect size: .18 to .24

Outcome measure: Responsive caregiving: Rich language environment scale

Scale of outcome measure: Ordinal

Normed or state test: No

Test-retest reliability: N/A

Internal consistency: N/A

Inter-rater reliability: N/A

Same outcome measure in treatment and comparison groups: Yes

Confirmatory question 2: Outcome Measure 1

Outcome domain: Other Outcome Domain - Attitudes toward parenting
Minimum detectable effect size: .18 to .24
Outcome measure: Parenting attitudes item
Scale of outcome measure: Ordinal
Normed or state test: No
Test-retest reliability: N/A
Internal consistency: N/A
Inter-rater reliability: N/A
Same outcome measure in treatment and comparison groups: Yes

Confirmatory question 3: Outcome Measure 1

Outcome domain: Other Outcome Domain - Knowledge about parenting
Minimum detectable effect size: .18 to .24
Outcome measure: Parenting knowledge scale
Scale of outcome measure: Ordinal
Normed or state test: No
Test-retest reliability: N/A
Internal consistency: N/A
Inter-rater reliability: N/A
Same outcome measure in treatment and comparison groups: Yes

Confirmatory question 4: Outcome Measure 1

Outcome domain: Other Outcome Domain - Confidence in parenting
Minimum detectable effect size: .18 to .24
Outcome measure: Parenting confidence scale
Scale of outcome measure: Ordinal
Normed or state test: No
Test-retest reliability: N/A
Internal consistency: N/A
Inter-rater reliability: N/A
Same outcome measure in treatment and comparison groups: Yes

Confirmatory question 4: Outcome Measure 2

Outcome domain: Other Outcome Domain - Confidence in parenting
Minimum detectable effect size: .18 to .24
Outcome measure: Parent self-efficacy scale
Scale of outcome measure: Ordinal
Normed or state test: No
Test-retest reliability: N/A
Internal consistency: N/A
Inter-rater reliability: N/A
Same outcome measure in treatment and comparison groups: Yes

Comments:

The responsive caregiving: serve and return interaction scale is researcher-developed, based on items developed by

Fisher et al., (2016). It includes 4 vignette-based items measured on a Likert scale.

The responsive caregiving: positive affect scale adapts and combines items from existing measures developed by Pianta (1996), Parent & Forehand (2017), and Krysik & Lecroy (2012). It consists of three items measured on a Likert scale.

We will measure frequency of reading and rich language environment with items adapted from the STIM-Q2 Toddler scale (Mendelsohn et al., 2011). We will measure frequency of reading with two items assessing frequency of reading with the child in days per week and and hours/minutes per day. We will use both items to calculate a weekly reading time estimate.

We will measure rich language environment with two items adapted from the STIM-Q2 Toddler scale. The items measure frequency of shared book reading and labeling with the child. Both use a Likert-type response scale.

The parenting attitudes item was developed by the research team. It is measured on an ordinal Likert scale.

The knowledge about parenting scale was developed by the research team. It consists of four items measured on a Likert scale.

The parenting confidence scale consists of three items adapted from another survey (Silander et al., 2018). Each item is measured on a Likert scale.

The parenting self-efficacy scale consists of one Likert-scale item adapted from Gibaud-Wallston & Wandersman (2001).

Section VII: Analysis Plan

Baseline data collected prior to start of intervention:
Yes

Description of baseline data:
• Child age (months)
• Pretest (Caregiver attitudes, knowledge, and confidence)
• Caregiver gender
• Child gender
• Child race or ethnicity
• Household income (more or less than $50,0000)
• Caregiver education level
• Whether the child attends center-based care

Covariates you plan to include in the model:
-, Caregiver education level, Caregiver gender, Child age (months), Child gender, Child race or ethnicity, Household income (more or less than $50,0000), Pretest (Caregiver attitudes, knowledge, and confidence), Whether the child attends center-based care

Analytic model:

$$Y = /beta_0 + /beta_1 TRT + /beta_2 Cov + /varepsilon$$

Our analysis of confirmatory outcomes will use the following ordinary least squares regression model:

Where *Y* represents the outcome of interest;

β_0 represents the intercept;

β_1TRT is a dummy variable equal to 1 if the parent was assigned to the treatment group and zero if the participant belongs to the comparison group;

β_2*Cov* is a vector of baseline scores and demographic characteristics; and

ε represents the participant-specific error term.

Plan to handle cases with missing outcome data:
Delete cases with missing data for the outcome being analyzed

Planned multiple comparisons adjustment, confirmatory question 1 (Other Outcome Domain):
Yes

Number of planned comparisons to adjust, confirmatory question 1 (Other Outcome Domain):
4

Correction for multiple comparisons, confirmatory question 1 (Other Outcome Domain):
Bonferroni procedure

Planned multiple comparisons adjustment, confirmatory question 4 :
Yes

Number of planned comparisons to adjust, confirmatory question 4 :
2

Correction for multiple comparisons, confirmatory question 4 :
Bonferroni procedure

Comments:
We will determine a uniform set of covariates and baseline measures to include in all research questions based on model fit, multicollinearity metrics, and bivariate correlations with the outcome measure ($p < .10$).

Using procedures informed by What Works Clearinghouse (WWC) guidelines for quasi-experimental studies (QEDs), we will examine baseline equivalence of the analytic sample on all baseline measures, parent income, and parent education (What Works Clearinghouse, 2014). We will calculate the standardized mean differences (d) on each

measure between intervention and comparison group. d is calculated by the difference in mean score between the treatment and comparison groups divided by the pooled standard deviation of the two groups. If the absolute value of d in pretest scores between the two groups does not exceed .25 of a standard deviation, this QED meets the baseline equivalence requirement; therefore, propensity score weighting is not needed. We will proceed directly to impact analysis.

Propensity score weighting. If the absolute value of d in pretest scores between the two groups is larger than 0.25 of a standard deviation, this QED fails to meet baseline equivalence; therefore, propensity score weighting will be used to equalize the two groups to re-establish baseline equivalence on pretest scores. We will calculate propensity scores using any of the following measures on which the treatment and comparison groups differ by d > .25: baseline measures, parent income, and parent education. In propensity score matching, the weight for treated participants is 1, and the weight for comparison participants is equal to pi/(1-pi), where pi is the propensity score for the i-th comparison student (Harder, Stuart, & Anthony, 2010; Hirano et al., 2003). After propensity score weighting, we will examine d for all baseline measures, parent income, and parent education to assure that each value is less than 0.25.

If baseline equivalence between treatment and comparison is established without propensity score weighting, we will use the multiple regression model described above to estimate treatment impact. No weights will be used.

If baseline equivalence between treatment and comparison is established through propensity score weighing, we will use weighted multiple regression model adjusting for propensity score weights to estimate the treatment impact. The weighted multiple regression model will be the same as above-mentioned multiple regression model except that propensity score weights will be included in the weight statement. The same propensity score weights will also be used in the treatment impact model as recommended by Curtis, Hammill, Eisenstein, Kramer, and Anstrom (2007); Hirano, Imbens, and Ridder (2003), and Rosenbaum and Rubin (1983).

Section VIII: Additional Information

Links:
No links have been added yet.

Files:
File Name: Power Analysis Univision QED REES Registry.docx
Description: Power Analysis

Comments:
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