

Self-Reported Outcomes With the Use of a mHealth Fetal Monitoring App During Pregnancy

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Abstract

- Fetal movement monitoring has been examined as means of assessing fetal health and detecting fetal distress that, left untreated, may result in stillbirth.
- Count the Kicks* is an evidence-based stillbirth prevention campaign focused on educating expectant parents about the importance of tracking fetal movement in the 3rd trimester of pregnancy.
- The purpose of this study is to assess the effectiveness of the *Count the Kick* stillbirth prevention campaign

Objectives

- The primary objectives include exploring:
- how expectant women use the *Count the Kick* app during their pregnancy;
 - if the app was effective in helping mothers track their babies' movements;
 - if the app increased awareness of a change in fetal movement, and;
 - if so, the health outcome of their baby(babies).

Study Design

Pilot survey (n =48) followed by survey of app users from 2015-2019 (n = 1463).

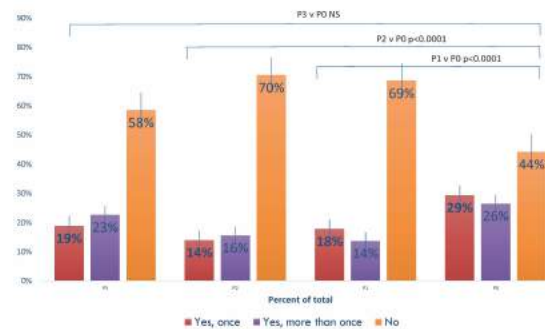
Survey responses were collected in SurveyMonkey® and consisted of Multiple choice, yes/no, and open-ended questions.

A total of 809 women that had previously used the mHealth app completed a self-report survey on their pregnancy outcomes, medical care, experience with the app, and birth outcomes.

Responses from complete surveys were analyzed by χ^2 analysis, McNemar test was used for the paired responses.

Results

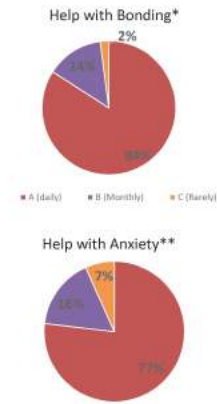
Graph 1. Concern about change in baby's movement by pregnancy



Graph 1 depicts that women were more likely to be concerned about a change in movement when using CTK app [P0 = pregnancy using mHealth app, P3-P1 = pregnancy not using mHealth app]

- Analysis showed significant differences in women's pregnancy experiences when they used the app to track fetal movement as compared to pregnancies when they didn't.
- Use of the *Count the Kicks* app was associated greater adherence to clinical kick counting recommendations (p<0.0001), increased knowledge of movement patterns and identification of a change in movement. Learning movement pattern associated with frequency of tracking (p<0.0001)
- Use of the app was also associated with reduced anxiety and increased maternal bonding. Women that tracked movements daily were more likely to feel less anxious about their baby's health (p<0.0001)

Graph 2. Help with emotional support by tracking frequency



Graph 2 shows that regular tracking was associated with feelings of bonding and connection with baby (p<0.0001*) and feeling less anxious about their baby's health (p<0.0001)**

Conclusion

- Use of the *Count the Kicks* app is associated with better birth outcomes and improved use and understanding of fetal movement monitoring.
- Educating expectant parents on this campaign can improve birth outcomes.
- The results of the study can be applied to stillbirth prevention campaigns and reducing health care disparities.

References

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