

Summary of findings

December, 2018

Thank you so much for participating in our study and sharing your experience of pregnancy with us!

We finished collecting data in February, but it turns out that making an app, and even making a summary of the study, takes even longer than making a baby...but here we are at last!

This report summarizes the findings of the Positively Pregnant Pilot study, and announces the launch of the new and improved Positively Pregnant app!



The Positively Pregnant Pilot Study

Who were they?

The women who volunteered to try out the app were 88 Kiwi women, 41 from the Waikato region, and 47 from other areas of New Zealand. They ranged from 19 to 43 years old, with an average age of 31. Almost half (47%) were working full time when they started the project, and another 31% were working part time; 17% were studying.

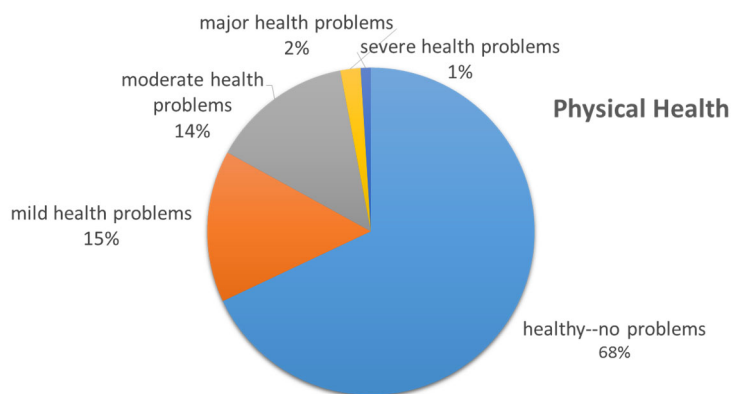
This was the first pregnancy for 39% of women; most had one or two prior pregnancies, and 59% were caring for children during their pregnancy. Of those who had been pregnant before, 41% had experienced one or more miscarriages. Of the total sample, 40% had experienced a pregnancy loss or fertility investigation or treatment.

The majority (79%) identified as New Zealand European; 14% identified as Māori, 2% Pacific, 5% Asian, 7% other European, and 2% Other. They tended to be well-educated, with 76% having some kind of tertiary qualification, 35% at graduate level.



How were they doing?

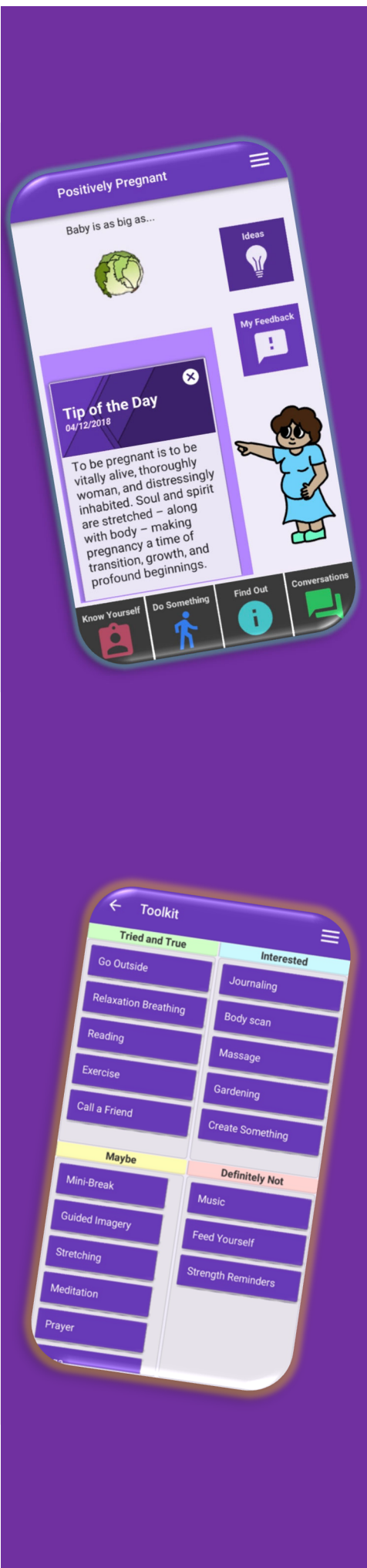
Most were having a physically healthy pregnancy, and were experiencing normal levels of stress, anxiety, and depression. Some, though, were having a hard time, with about 10% having significant levels of depression, 17% feeling at least moderate anxiety, and 12% feeling at least moderate levels of stress. Over time, we found a pattern similar to what others have found—anxiety was highest in the early weeks of pregnancy, lowest in the middle, goes up a



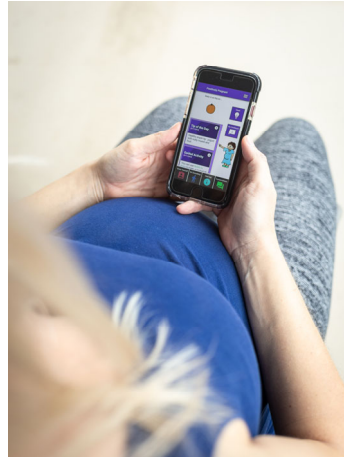
bit in the third trimester (getting ready for birth!), and was much decreased after the baby was born. Depression generally trended downward across time.

How (much) did they use the app?

We asked questions about app use at 24 and 36 weeks; we'll focus on 24 weeks because it was closest to the time most women were actively exploring the app, and we had the best response (72%) to the survey at that point.



At the 24 week point, women varied quite a bit in how long they had been using the app—from just a couple of weeks, to three or four months. By that time, a bit over a third (36%) hadn't used the app in the last two weeks; almost half (48%) had used it once or twice, and 16% had used it more frequently, a few times a week or so. We asked which bits of the app women had used, and they ranged from none to 27 bits—the average woman had used about 12 of the modules of the app.



Who uses the app most? Who likes it best?

The short answer is...we don't know. There doesn't seem to be a pattern. We wondered if having a child at home, pregnancy history, stress or distress, education, or age might be related to how satisfied women were with the app, or how much they used it...but nothing turned out to be related to satisfaction or frequency of use. We'd like to know more about whether particular groups of women—migrant women, or young mums, or Māori mums—find the app useful—but we didn't have enough volunteers in those groups to

separate out for now—we are doing a separate study with young mums, and hopefully with other groups in the future.

What parts did they like best, and use most?

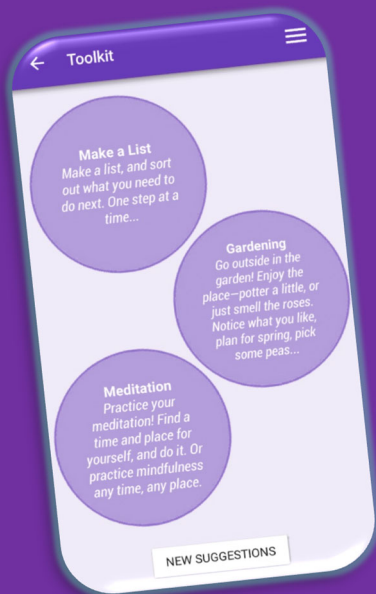
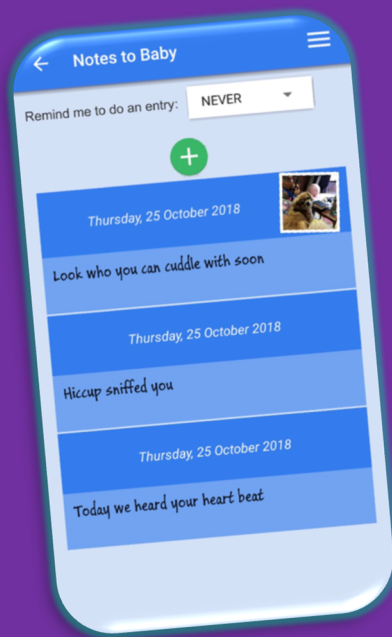
Women were most likely to use the "Know Yourself" parts of the app, especially the ones first on the list—Know Your Strengths, Know your Strategies, and Know Your Stressors. For all the app elements except three, the majority of people who tried them found them helpful—the most helpful being *Know Your Strengths* and *Know Your Health* in the Know Yourself section, *Relaxation Breathing*, *Have a Laugh*, *Stretching*, *Gratitude*, and *Strength Reminders* in the Do Something section, and *Who Does What* and *Values and Priorities* in the Conversations section. The ones that people found least helpful (*Guided Imagery*, *100 things*, and *Notes to Baby*) were only tried by a few (10-18) people.

Of course, we didn't expect everyone to like all parts of the app—one of the principles underlying Positively Pregnant is that different things work for different people, and so by trying things out, and reflecting on your own preferences, needs and desires, you can develop a personalised plan for meeting the challenges of pregnancy and parenting.

Feedback and suggestions

One of the most useful parts of the pilot for us was to get the comments and feedback so many of you provided. Some Waikato participants came to focus groups and talked in detail about their experiences, and many wrote comments and ideas on their surveys. We really appreciate this input, and have used it to make changes to the new version of the app. Some of the main changes are:

- More graphics, and different colours for different areas of the app, to make for easier navigation
- Added information on baby's development, tailored to gestation each week
- More easily accessible feedback from Know Yourself modules
- More intuitive flow and clearer processes like 'save buttons'
- Clearer flow from Know Your Health to Health Plans and Goals



How did it all come out?

Did using the app help? Did it make you feel less stressed, anxious, more confident? We hope so...but we can't really tell from this study, because it was a small pilot study, with no comparison group—and also because the women who volunteered for the study were, on the whole, really health-conscious women who were coping well to begin with.

We did look, though, at the small group of women who were more depressed or anxious to begin with, to see if they used the app differently (more, or less?), and if their distress improved over time. Just looking at those women, depression and distress did decrease, especially for depression, but the numbers are small, and we don't have a comparison group, so we can't be sure whether it was the app that was helping. The most stressed out women were no more (or less) likely to use the app.

But there was some interesting stuff about how it DID come out...

Some of you may remember Ajay Nielsen, who was doing her masters on women's experiences of childbirth. Ajay is interested in what contributes to women having a positive experience of labour and delivery—so she talked with some of the women who'd had positive birth experiences, and also looked in detail at the questionnaires about women's experiences of the birth.



The good news is, for most women (65% of them), childbirth was a positive experience. About 15% found it 'mixed', and 20% rated it overall as negative. The factors that were most strongly associated with having a positive experience of childbirth were feeling safe and feeling in control; professional support and participation—that experience of collaboration in the birth process—was also important. Interestingly, pain wasn't significantly related to how women felt about their birth experience. Levels of anxiety, stress and depression during the pregnancy were also not significantly related to the experience of birth—it really seemed to be the sense of safety and control in the birth process. This was borne out by Ajay's interviews with women who had positive birth experiences. They talked about how their relationships—with their midwife and their partner—and their ability to take control of the things they *could* control—whether it's the music in the room, or their own thoughts—helped them to experience the birth process as positive and empowering.

And the app is out too!

We have just launched the new and improved (much improved from when some of you started using it in its first, baby-step versions) Positively Pregnant app at the New Zealand Positive Psychology Association's conference on 24 November, 2018! It is now free and available on the App Store and Google Play—so tell your friends!

Thank you all for all you've contributed to this project. If you have any questions or suggestions, please feel free to get in touch: carrie-barber@waikato.ac.nz, or visit our website: positivelypregnant.org.nz

