

# Cycle Apps – help or confusion?

## Understanding women’s perception towards cycle tracking apps.

Sharon Bench-Capon, Sharon Bond, Sarah Johnson, Sarah Weddell  
SPD Development Company Ltd., Bedford, UK

### Background

- Women seeking to conceive, wish to do so quickly, so often choose tools to help them to get pregnant faster.
- The day of ovulation can vary considerably between women and even between cycles<sup>1</sup>, so accurate methods to time intercourse appropriately are of value.
- Calendar-based apps which predict women’s fertile phase are based on cycle length alone have been shown to be inaccurate<sup>2-5</sup>.
- Cycle apps are commonly used by women seeking to conceive; 67.4% of women who participated in the wider study reported to have previously used them.
- However, most fertility apps have been shown to be inaccurate (2-5) and do not provide women seeking to conceive information regarding accuracy.
- This leads to the potential for women using predictions from calendar-based apps to mistime intercourse, reducing their likelihood of conceiving and delaying increasing time to pregnancy.

### Study question

How do women perceive the fertility predictions that are provided through calendar-based cycle tracking apps?

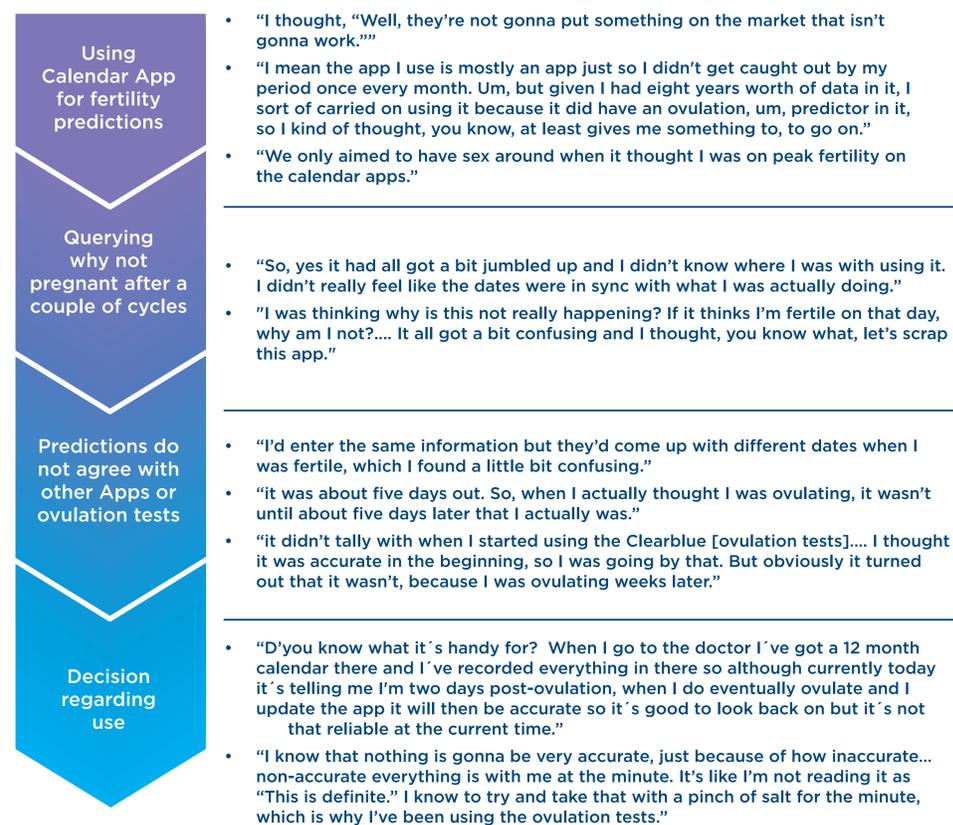
### Methods

- This study was a qualitative component of a larger mixed methods study examining the efficacy of the Clearblue® Connected Ovulation Test System.
- Women of reproductive age (18-40), who had a smartphone and were actively trying to conceive were recruited from across the UK.
- Telephone interviews were conducted to discuss views on fertility, family planning and experience of trying to conceive.
- We performed 38 qualitative semi-structured in-depth interviews on women randomly sampled from both study arms and all study outcomes (conceived after 1 or 2 cycles, or did not conceive during the study).
- All women were provided ovulation tests before the interviews were conducted, either as part of the test arm or after completing the study for those on the control arm.
- Interviews were recorded and the verbatim transcripts were coded line by line, then similar codes grouped into categories (themes) using NVivo. The interviews were conducted throughout May – September 2018.
- Ethical approval was given from an internal review board and all volunteers gave written, informed consent. Trial registration number: NCT03424590.

“...I don't know if I'd have questioned the app. I might have just questioned my body more than the app, because, like I say, you don't know what's going on inside your body, I could have not been ovulating or releasing an egg, or whatever. ....it's hard to question technology really, isn't it? ....Because you think it's got the answers to everything”

### Results

Key themes that arose from the analysis of the interviews regarding apps are shown as stages in the users journey when using cycle apps for conception purposes (figure below).



### Discussion

- Busy lifestyles and the tendency for sexual frequency to decline over the course of the relationship<sup>5</sup>, means that timed intercourse is often used when a couple decide to start trying for a family.
- Fertility tracking apps are very popular but have been shown to be inaccurate<sup>2-4</sup>. Most do not provide any evidence to support their claims or give an explanation on how the predictions are calculated.
- Some women trust these calendar-based apps implicitly targeting intercourse on the days predicted and would question their bodies before the fertility apps that they use.
- During study participation, many women found that predictions from their previously trusted calendar-based apps did not agree with results from ovulation tests which they found confusing.

### Conclusion

- Using calendar-based apps without understanding their limitations and following incorrect advice could prolong a woman’s time to pregnancy and cause unnecessary stress.
- We would recommend that fertility apps provide more information on their accuracy and limitations in order to be of greater help to women who are trying to conceive.

### Declaration of interest

Authors are employees of SPD Development Company Ltd, a wholly owned subsidiary of SPD Swiss Precision Diagnostics GmbH, the manufacturer of Clearblue pregnancy and fertility tests. The study was funded by SPD Development Company Ltd. Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Clearblue® is under license. Other trademarks and trade names are those of their respective owners.

#### References

1. Robinson JE (2007) Increased pregnancy rate with the Clearblue fertility monitor. *Fertil Steril*. 87(2):329-34
2. Johnson S (2018) Can apps and calendar methods predict ovulation with accuracy? *Current Medical Research and Opinion* 34(9):1587-1594
3. Setton R (2016) The accuracy of web sites and cellular phone applications in predicting the fertile window. *Obstet Gynecol* 128:58-63
4. Moglia ML (2016) Evaluation of smartphone menstrual cycle tracking applications using an adapted APPLICATIONS scoring system. *Obstet Gynecol* 127:1153-60
5. Call V (1995) The incidence and frequency of marital sex in a national sample. *J Marriage Fam* 57:639-52