Cycle Apps - help or confusion? Understanding women's perception towards cycle tracking apps.



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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 cycles¹, 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 inaccurate²⁻⁵.
- 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 boardand 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).

Using
Calendar App
for fertility
predictions

- "I thought, "Well, they're not gonna put something on the market that isn't gonna work.""
- "I mean the app I use is mostly an app just so I didn't get caught out by my period once every month. Um, but given I had eight years worth of data in it, I sort of carried on using it because it did have an ovulation, um, predictor in it, so I kind of thought, you know, at least gives me something to, to go on."
- "We only aimed to have sex around when it thought I was on peak fertility on the calendar apps."

Querying why not pregnant after a couple of cycles

- "So, yes it had all got a bit jumbled up and I didn't know where I was with using it. I didn't really feel like the dates were in sync with what I was actually doing."
- "I was thinking why is this not really happening? If it thinks I'm fertile on that day, why am I not?.... It all got a bit confusing and I thought, you know what, let's scrap this app."

Predictions do not agree with other Apps or ovulation tests

- "I'd enter the same information but they'd come up with different dates when I
 was fertile, which I found a little bit confusing."
- "it was about five days out. So, when I actually thought I was ovulating, it wasn't until about five days later that I actually was."
- "it didn't tally with when I started using the Clearblue [ovulation tests].... I thought
 it was accurate in the beginning, so I was going by that. But obviously it turned
 out that it wasn't, because I was ovulating weeks later."

Decision regarding use

- "D'you know what it's handy for? When I go to the doctor I've got a 12 month calendar there and I've recorded everything in there so although currently today it's telling me I'm two days post-ovulation, when I do eventually ovulate and I update the app it will then be accurate so it's good to look back on but it's not that reliable at the current time."
- "I know that nothing is gonna be very accurate, just because of how inaccurate... non-accurate everything is with me at the minute. It's like I'm not reading it as "This is definite." I know to try and take that with a pinch of salt for the minute, which is why I've been using the ovulation tests."

Discussion

- Busy lifestyles and the tendency for sexual frequency to decline over the course of the relationship⁵, 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 inaccurate²⁻⁴. 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

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Reference