

Attitudes and opinions of women using a novel fertility monitor whilst trying to conceive

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Introduction

- There are a limited number of days in each cycle when a woman can become pregnant,¹ known as the 'fertile window'
- Many women are unaware of the timing of their fertile window, or miscalculate when it occurs.² This means they may be missing the times during their cycle at which intercourse would give the highest chances of conceiving
- A woman's individual fertile window can be accurately identified⁴ using a new monitor, Clearblue™ Advanced Fertility Monitor, which tracks both luteinising (LH) hormone and estrone-3-glucuronide (E3G)³
- This enables not only identification of the day of ovulation (by LH surge), but also the additional days of high fertility that precede ovulation, characterised by rising levels of E3G (Figure 1)

- This method of fertile phase detection is the same as the Clearblue Fertility Monitor which has been shown to increase the chance of conception by 89%, in the first two cycles of use⁴
- The new monitor has a touchscreen interface, with additional functionality that enables the input and storage of information on menstruation, intercourse and cycle history
- Users can also test for pregnancy on the same monitor, using colour-coded pregnancy test sticks (Figure 2)
- The aim of this study was to investigate the attitudes and opinions of women using this new monitor whilst trying to conceive.

Figure 1: Changes in urine concentration of LH and E3G can be used to track fertility during the ovulatory cycle.

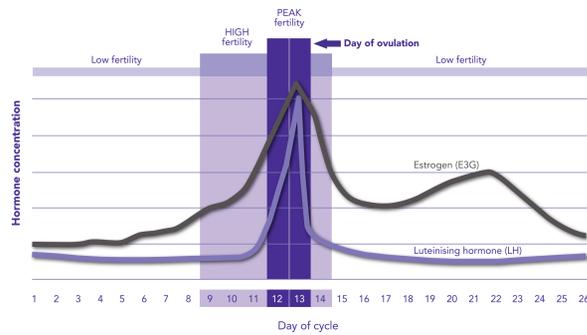


Figure 2: (A) The monitor showing its home screen, and test sticks (purple for fertility tests and blue for pregnancy tests); (B) Fertility testing results screens for the Clearblue Advanced Fertility Monitor, with information from the instruction booklet for users to understand their results.



Methods

- 395 women who were seeking to conceive consented to use the monitor for one menstrual cycle (NCT01948258, ethics approved)
- Women were recruited via Clearblue website
- Semi-structured recorded telephone interviews, consisting of 38 questions defined on the interview schedule, were conducted within two weeks of the end of the study cycle
- Sample size was based on theme saturation and included 14 women who did not become pregnant and 7 women who achieved pregnancy: (n=21). Not all volunteers answered all questions, so results are presented per number of respondents to each question
- Thematic content was analysed to identify emergent themes.

Results

A summary of the volunteers' opinions of using a monitor to time intercourse for the purposes of achieving pregnancy is provided in Table 1.

Table 1: Summary of feedback on 'concept' of using a monitor to achieve pregnancy.

| POSITIVE | NEGATIVE |
|--|--------------------------------|
| Better understanding of cycle | Encourages obsessive behaviour |
| Easier to target ovulation | Puts pressure on partner |
| Monitor 'takes responsibility' | Makes intercourse feel staged |
| Decreased worry/anxiety | |
| Provides guidance | |
| Can get medical help earlier if needed | |
| Helps make intercourse more efficient | |

- Of women who responded, 94% thought it important to understand their cycle when trying to conceive, in order to target ovulation more precisely, to help reduce stress and to speed up conception, as well as to allow them to assess if additional medical help was needed (Figure 3)
- Eleven of 17 respondents felt that they understood their cycle better after using the monitor, with the monitor identifying cycle length, time of ovulation and fertile window differently to the perception of some women. Others felt that the monitor confirmed their existing understanding of their cycle (Figure 4)
- A method to plan the timing of intercourse appealed to 20 of the 21 respondents, for reasons which included increased feelings of control and convenience, along with reduced pressure and stress, and to maximise the chances of conception
- After starting to use the monitor, 13 of 17 women responded that they felt differently about trying to conceive, with many stating that they felt more confident and in control, and reassured that they were taking an active role in maximising the chances of conception. Some negative feelings were also expressed, such as a perceived loss of spontaneity, pressure on the partner, and intercourse seeming more staged or artificial.

References

- Wilcox A.J., et al. Timing of sexual intercourse in relation to ovulation. *New England Journal of Medicine*. (1995) 333: 1517-1521.
- Zinaman M., et al. Accuracy of perception of ovulation day in women trying to conceive. *Current Medical Research and Opinion*. (2012) 28: 1-6.
- Behre HM., et al. Prediction of ovulation by urinary hormone measurements with the home use Clearblue Fertility Monitor: comparison with transvaginal ultrasound scans and serum hormone measurements. *Human Reproduction* (2000) 12: 2478-2482.
- Robinson J., et al. Increased pregnancy rate with use of Clearblue Easy Fertility Monitor. *Fertility and Sterility*. (2007) 87: 329-34.

† Studies conducted using the Clearblue Fertility Monitor. The chemistry used to detect E3G and LH in the Clearblue Advanced Fertility Monitor and the methodology used to convert test signals to fertility status are the same as those used in the Clearblue Fertility Monitor.

Acknowledgments

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Declaration of interest

At preparation of the abstract, all authors were employees of SPD Development Company Ltd., a fully owned subsidiary of SPD Swiss Precision Diagnostics GmbH, the manufacturers of Clearblue™ products. The study was funded by SPD Development Company Ltd.

Figure 3: Responses regarding the appeal of a method to time intercourse.

Why does using a method to time intercourse appeal to you?

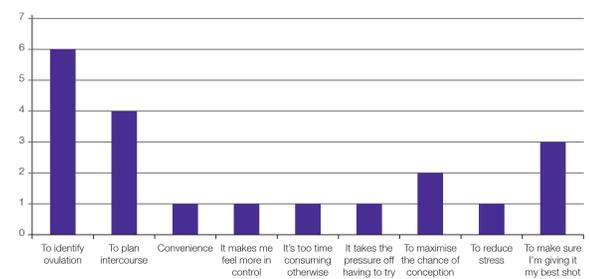
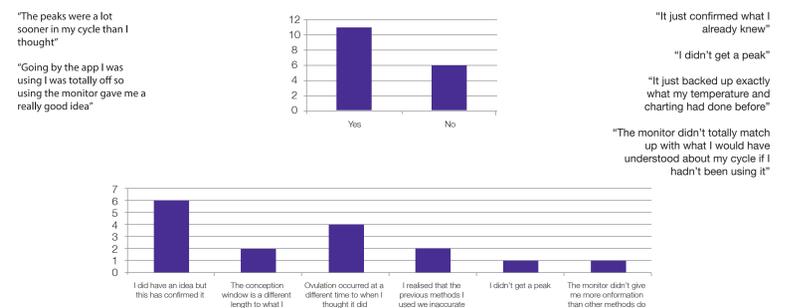


Figure 4: Responses regarding the users' understanding of their cycles.

Do you feel that you have a better understanding of your cycles now than you did before using the monitor?



- 86% of the women used the pregnancy testing facility, and the remainder didn't use it because their period started. Those who used the pregnancy test found it straightforward and felt that the result given was clear and easy to understand
- Eighteen of the 21 respondents said they would show the monitor results to their doctor, in order to give the doctor as much information as possible and to demonstrate their commitment to conceiving. However, two women said they would not show the monitor to their doctor in case their physician did not have confidence in it
- All of the 21 respondents agreed that the monitor was easy to use, and all rated it highly, with a mean score of 4.5 on a five point scale, where five was "brilliant"
- Advantages and disadvantages of the Monitor are shown in Table 2.

Table 2: Summary of feedback on themes relating to the monitor.

| POSITIVE | NEGATIVE |
|--|---|
| Easy to use | Concerns about price |
| Keeps all data together | Touch screen not as good as mobile phones/tablets |
| One method for ovulation and pregnancy test | Can't record additional tracking data |
| Tells you when to test | Not discreet enough |
| Provides direction and 'takes control' which gives peace of mind | Onerous to do testing every day |
| Helpful data display (it also helps my husband understand my cycle) | Testing window is too short |
| It highlights high days as well as peak days | Needs data backup |
| It could help you get medical intervention sooner if required by sharing results with HCPs | Needs alternative power source |

Discussion

- Many positive benefits were reported by women using the new fertility monitor;
 - Increased information provision making women feel they had a better understanding of their cycles
 - Better identification of fertile days allowed them to plan intercourse to maximise the chances of conception
 - Enabled partners to gain a better understanding
 - Giving more control and reassurance overall
- Some negative aspects were also identified, including cost and limitations of the technology, as well as feeling that intercourse was 'staged' and less spontaneous. As recruitment was via the Clearblue website, selection bias should be considered, however the participants do represent women who would choose to use such a monitor to assist with conception
- Due to the short nature of the study, some of the features of the monitor (such as the cycle summary chart) could not be fully explored, and women's response to gaining more understanding regarding their individual cycle variability could also not be examined
- The inclusion of pregnancy testing within the fertility monitor could eliminate the need for multiple devices and add to the convenience appreciated by the users over the longer term.

