

# Understanding the user experience of fertility and period tracking apps

The Information Commissioner's Office

October 2023

# Background, objectives and methodology





# Background

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The ICO wish to understand if fertility and menstruation tracking apps may be misusing users' data in ways that may be causing harm, and to capture areas of good practice.

In the Women's Health Strategy for England, presented to parliament in August 2022, a series of 10-year ambitions were presented including **“greater use of digital health technologies to empower women – such as period tracking and menopause apps”**, and a desire for closer collaboration between 'FemTech' and the NHS to deliver collaborative innovation and reach a wider audience.

Given the potential increasing prominence and usage of female health apps, it will be crucial that these apps can be trusted with their users' data and that good practice is adhered to.

# Objectives

**Overarching aim:** To understand the user experience of apps whose primary purpose is related to fertility or menstruation.

- Overall views on fertility and menstruation apps, benefits and concerns about using these apps
- Awareness of data protection concerns relating to the use of these apps
- The amount of data that users input into their fertility and menstruation apps from sign up to during use
- How easy users feel it is for them to exercise their data rights while using the apps
- Users' understanding of how their personal information is used when they enter it into these apps
- Users' reactions to finding out what could happen to the data they enter into fertility and menstruation apps
- Knowledge and understanding of privacy policies and their approach to this when signing up for these apps

# Methodology



## User interviews

10 interviews were carried out with 3 lapsed users and 7 current users of period and fertility tracking apps. Interviews covered:

- Reasons for selecting their chosen app
- Ways in which they use/used the app
- Their opinions on the sign-up process of a different app by taking part in a 'walk-through'
- Their general views on data privacy in relation to their current app



## Focus groups

Two focus groups were carried out, one with those who use apps mainly for period tracking and the other with those who use the app for fertility tracking. Focus groups covered:

- Reasons for selecting their chosen app
- Ways in which they use/used the app
- General attitudes to data privacy
- Their attitudes to data privacy in relation to period / fertility tracking apps

# Methodology: Walk-through



## Walk-through

In the in-depth interviews, users were asked to navigate through a sign-up process for a fertility and period tracking app, they were shown screens in the sign-up process and asked to indicate:

- What they would click on and why
- What information they would enter at each stage
- Whether the information seemed relevant
- How they found the process overall

Due to confidentiality reasons, it was a walk-through shared on screen rather than the respondent signing up themselves.

# Methodology – some caveats

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As this research is qualitative in nature, **findings are indicative of of views** across a range of period and fertility tracking app users, but should not be taken as representative of app users as a whole



Users were invited to take part in the research via an opt-in process - meaning the **sample is self-selected** and may not be representative of the wider body of period and fertility tracking app users



All participants in this research **currently or recently used** period and fertility tracking apps, therefore, do not represent those that do not use these apps and their potential concerns with data usage.

# Demographic breakdown

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	User Interviews	Focus Groups
<b>Purpose of app use</b>		
Fertility tracking	5	8
Period tracking	5	6
<b>Age</b>		
16-24	1	0
25-34	6	9
35-44	1	5
45-54	2	0

# Overall use and views on fertility and period tracking apps

# All were using the apps as their main method to track their periods and/or fertility

## Key factors that encouraged users to choose the app:



Most signed up to the apps through recommendations via friends, and then through looking at the popularity and ratings on app stores.



Some discussed the ability to use some of the apps' features for free.



A few mentioned that they were using the apps to help conceive, with one noting a consultant recommended they start using an app.



Some users noted using multiple period and fertility tracking apps together to improve the accuracy and efficiency.

*"Mostly it was because my friends had it...when we were out for dinner, and we were talking about periods... my friends said 'have you seen this app'..."*

**Lapsed user, Period tracking**

*"It is the free version anyway and I think it offers a lot, which is shocking because with anything else you get the trial and then you have to pay."*

**Current user, Period and fertility tracking**



**The reputation of the apps' data privacy / security did not come up unprompted as a reason for using an app**

# Benefits and features found useful within the app

A number of different features were mentioned by users as useful:

- Mood tracking
- Visual calendar
- Community posting / forums
- Ability to enter in ovulation test results
- Ability to predict next period dates
- General education content around period and sexual health
- Notifications and alerts when due on period / when ovulating

*“Visually it was good, it has a nice calendar on it that was quite discreet so you could be looking at it without giving too much away.”*

**Lapsed user, Period tracking**

*“They have a Forum section, and I am sure that if I wanted to search for anything, I would be able to find [the answers] on there.”*

**Current user, Period tracking**

*“When I do decide to have children, I could use the app to track dates when I'm highly fertile and also my period health as that's all important...It's kind of like my period diary I suppose, and I treat it like that...”*

**Current user, Period and fertility tracking**



Very few users used an **associated device** such as a thermometer; one users felt this was useful, though a couple of other users **did not feel like it achieved much.**

# When asked to think about potential concerns with the app, none of the users shared concerns around how their data is used

When prompted to share any concerns with the app, no users mentioned concerns around data security or how their data is used.

There were three broad concerns shared:



**Inaccuracy** in predicted dates from the app.

Some users felt they may rely a bit too much on the algorithm in the app, which is not always fully accurate.



Concern around using the app as purely a **form of contraception**.

Some of the apps can be used for contraception but some users indicated they would not feel comfortable relying solely on this.



Too **much pressure on getting pregnant**.

Those using the app for fertility tracking were worried that they put a lot of pressure on themselves and getting pregnant, and the app can sometimes amplify this.

# Lapsed users all quit using their apps for different reasons



One mentioned she had stopped using the app after the free trial period, as due to the current cost of living crisis she cannot justify spending money on apps like this. However, if she was able to use the app for free, she would have continued to use it.

*“It was quite a lot of money... if it was a bit cheaper... where we already have to pay so much for period things already... I just think if the app for this particular one was free...”*

**Lapsed user, Period tracking**



Another noted that she stopped using the app purely due to personal reasons as her periods had “*vanished*” for a period of time.



One mentioned she had stopped using some of her previous fertility apps as it didn't feel like the app was taking the purpose of its use seriously. However, she had gone on to find an app that worked for her and has now conceived so is using a different app for pregnancy.

*“It felt like it wasn't as serious and wasn't taking it seriously, I felt like I was on this project to get pregnant... it didn't feel appropriate for what I was there for... felt more comical.”*

**Lapsed user, Period and fertility tracking**



**Data privacy or data concerns were not mentioned by lapsed users as a reason for stopping using the apps**

# Approach to entering data into the apps



# Almost all the users were comfortable with the information that was requested during the registration process

## Experience with the sign-up process:



Most users found the sign-up process **quick and easy**.



Almost all of the users thought that all the information they were asked seemed **relevant and felt comfortable** giving this.



Most users felt the information they were asked for **was mandatory** when prompted but were understanding as to why.

Only a couple of users **criticised this process**; one from personal experience and one whilst being shown an example sign-up process. This did not cause issue or major concern, but they observed that a lot of information was being asked at this stage.

*“The registration process was really easy, you know it was just your name, DOB and then inputting data like your last period date; there wasn't anything technically challenging about it.”*

**Current user, Period tracking**

*“At registration page it was just basic information, and yeah it seemed relevant... I remember feeling secure in the app and it wasn't too intrusive.”*

**Lapsed user, Fertility and period tracking**

*“I remember it being a bit of a fuff and a chore, and I think I held off doing it for such a long time, and then we started trying so it became more important... I think in my initial thoughts were like, why am I doing this? Why are you asking me these questions?”*

**Current user, Fertility and period tracking**

# Most users recalled entering name, email, DOB and period dates when signing up for the app



Most users recall entering some **key pieces of information** during the sign-up process:

- Purpose for signing-up (e.g. trying to conceive or period tracking)
- Date of last period
- Length of cycle
- Age / DOB
- Email address

*"It didn't feel too intrusive even though it is an intrusive factor, I didn't feel like I was giving too much information away."*

Lapsed user, Fertility tracking



Some users also recalled entering some **further details** such as:

- Height
- Weight
- BMI
- Moods / symptoms related to cycle

*"[Feel relevant?] Oh yeah definitely... I think just being a woman you know why they might want your date of birth... the menopause and all of that... what they were asking for was not too out there."*

Lapsed user, Period tracking

There was some **uncertainty as to the level of detail they entered at this initial stage**, compared to once they started using the app. However, this did not matter, users were generally **happy to enter this information at all stages**.

# Users regularly used their app, though frequency of use had clear variation by time of the month

*“Once my ovulation is done, I won’t open it again until my period.”*

**Current user, Fertility tracking**

Most users (specifically those using for fertility tracking) frequently used the app around ovulation time



All users used the app most frequently in the run up to and during their period

*“So like I’m currently on my period... according to the app my period cycle has been 5 days long, but this is my 7th day... so I’ve now gone on the app to add that I’ve got two more days... I notify the app when my period ends, and I probably won’t go on it again until the next month’s period...”*

**Current user, Period tracking**

*“I try and use it every day, but I guess the challenging thing is remembering to check your temp in the morning as soon as you wake up.”*

**Current user, Fertility tracking**

A few users used the app **daily**, often prompted by notifications. This was more common when using for fertility tracking, and often when inputting temperature.

A few users stated they used the app a **couple of times a week** outside of their period to read articles and information content.

*“I sometimes find myself just popping on there because it also provides advice.”*

**Current user, Fertility and period tracking**

# Most users entered a variety of key information about their cycle on a regular basis and were comfortable doing so

The type of information the users regularly enter into the app mostly related to their period dates and symptoms:



All the users entered the **dates of the periods** into the app



Most of the users entered **symptoms**, such as pain and mood swings.



A few users mentioned that they used a device associated with the app, such as a thermometer, and they input their **temperature** into the app each day.



A few users entered other aspects specific to **ovulation** such as results of ovulation tests, cervical mucus and medication relating to fertility.



A small minority mentioned that they entered **sexual activity** into the app, either in relation to trying to conceive or contraception.



No users shared concerns about entering this information into the app and were comfortable sharing this information regularly.

When asked in focus groups which of these areas were of higher levels of sensitivity or concern, both groups felt all were fine.

*“Basically, I wanted to monitor how many days I was on my period to make sure it was frequent... and definitely moods...”*

**Current user, Period tracking**

*“I don't have any concerns. I don't put enough sensitive information in it. I'll talk to anyone about my period... I don't know why they'd need to steal period tracking data.”*

**Current user, Period tracking**

# Users were keen to enter information in order to benefit the most they could from the app and there was an absence of concern around the use of this information



There were a number of key reasons why users entered a wealth of information:

Most users felt that they would get **more accurate tracking information** and period cycle / ovulation predictions with entering more specific information.

Some users highlighted that they had downloaded this app for a reason and **were happy to enter this information to experience the benefits of the app.**

A few users who were tracking for fertility purposes indicated that they had been **recommended this by consultants / doctors / specialists and stated how useful** it was in having the tracking information.

*"It's almost like a logbook that I can go back and reference for things... which is really useful to have."*

**Current user, Period tracking**

*"I found it really useful that I could go to the Doctor and go 'there you go,' it's handy to provide them with everything."*

**Current user, Fertility tracking**



Even when prompted in the focus groups, the only information that was flagged as potentially concerning was **name and email address**, but they were comfortable that the app held this information.

No users interviewed would be worried if their menstrual cycle information was 'leaked'.

No users who used associated devices mentioned any concern with the data collected here.

# Engagement with privacy policies



# Most users reported that they would not engage with privacy policies on apps

## Key reasons why users don't engage with privacy policies:



Most users felt that their policies are long and complicated, often using too much jargon making it difficult to understand.



Most users trust that these apps are approved and wouldn't be allowed on app stores if they weren't safe.



Some users indicated that they 'probably should' engage more with the privacy policy.



A few noted they were 'simply lazy and didn't care' about reading through a privacy policy, and 'just press accept'.



In specific relation to **period and fertility tracking apps**, some felt that due to the type of information they generally input they were not concerned around privacy. However, gave examples of banking apps as ones they may be more concerned about.

*"When you open that document it's massive and there's so much to go through."*

**Current user, Period tracking**

*"I think because it has to be so watertight at the moment, it's been checked by so many lawyers and people before it even gets into an app and then onto the Apple platform... But I think some people might want to read it because it's a personal topic."*

**Lapsed user, Fertility tracking**

*"My name, date of birth and a few facts about my period, is not information I'm concerned that anyone knows...."*

**Current user, Period tracking**

# Most respondents did not look at the privacy policy when signing up for their app



Most users felt that the sign-up process to their current app was easy and straightforward.

*“The registration process was really easy, you know it was just your name, DOB and then inputting data like your last period date; there wasn't anything technically challenging about it.”*

**Current user, Period tracking**



Most users also were not concerned about the information they had to provide during the sign-up process.

*“It didn't feel too intrusive even though it is an intrusive factor, I didn't feel like I was giving too much information away.”*

**Lapsed user, Period and fertility tracking**



However, most users said that they must have been shown something during the sign-up process and just ticked yes but none recalled any detail of what they were shown.

*“I'm guilty of not reading any of the terms of service or any policies. I tend to just agree. I tick agree and sort of yeah, keep moving, I don't have the time.”*

**Current user, Fertility tracking**



When running through the app walkthroughs in the depth interviews, no one clicked on the privacy policy to read it unprompted.

# Understanding on how data is used



# No users had previously looked into how their fertility or period tracking app used their data

Users did not express concern regarding how their data is used so had never looked into this, other specific reasons for not looking into how their data was used included:



Some users felt that they trusted the app because it was on **an official app store**, meaning that it must be secure.

*“Because it had so many users and so many stars, I assumed it had all the privacy in.”*

**Lapsed user, Period and fertility tracking**



Several users were not concerned because they **didn't have the time to check** and just wanted to use the app for the purpose they downloaded it.

*“Maybe I've not much patience... I should have taken a bit more time to read it.”*

**Lapsed user, Fertility and period tracking**



Several users mentioned that they would not be concerned with the **type of information they enter into the app** being shared, because they don't consider it as sensitive as information such as bank details.

*“As far as I am concerned, I wouldn't share anything on an app that I am not comfortable with anyone else finding out, so it doesn't really bother me.”*

**Current user, Period tracking**

# Users had low levels of awareness of how apps use their data, though most assumed it would be used for improving the app and targeted advertising



When prompted, users would expect their data to be used:

For **improving the app**:

- **Tracking trends** of those with similar demographics
- **Improving features**
- Most users viewed this positively as it could help other women like them

For **marketing / targeted advertising**



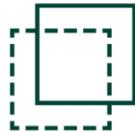
When prompted, users would not expect their data:

To **not be kept safe**; they would not expect apps to sell their name and email address.

A couple of users using apps for fertility tracking mentioned that it **should not be used for medical purposes / advice**; they would not want their data used to market the app in a way that overpromised, such as ‘50% of women got pregnant within 3 months’, they felt it would be insensitive.

*“Legally as transparent as they need to be, but then down to the user.”*

**Current user, Fertility tracking**



There were mixed views in the focus groups on how **transparent they are on how they use data**, most felt they probably are transparent but you have to look for it and a couple of users felt they were not that transparent because you have to seek out how they are using data in the ‘small print’.

*“Don’t think they are transparent at all, don’t think any apps are.”*

**Current user, Fertility tracking**

# Most users did not know whether their data was being shared with third parties, most assumed so and were not too concerned about this



Most users **assumed their information was being shared with third parties** and generally assumed they had **agreed to it at some point** in the sign-up process or that somewhere in the app it told them that information was being shared.

*"You just get carried away when downloading stuff, you don't read everything."*

**Current user, Period and fertility tracking**



Generally, **level of concern around this was low:**

- The nature of the data shared on the app was not felt to be of concern
- You generally expect this now with apps that we download and the 'era we live in'
- Some users simply weren't worried about how their data was used

*"Yeah, I mean that's fine, it doesn't really bother me too much."*

**Current user, Period tracking**



A couple of users **expressed concern** and would hope that their data is not being shared with third parties.

*"I'm not too fussed about sharing data on my period; the symptoms that I have actually, if that's useful for them to use elsewhere and research, then please go ahead! So, it's not something that would bother me. I'm not too fussed. But, if it was something else, then perhaps I would be, something that's more personal to me. Then maybe I would be a bit more concerned."*

**Current user, Period and fertility tracking**

# There was an assumption that using these apps may lead to targeted advertising, with main concerns around this linked to sensitivity and annoyance

There was a general sense of **inevitability** that their fertility and period tracking app would use their data for targeted advertising.

For many users, this was just the way things are now and **did not cause much concern**.

A few of users expressed general **annoyance and frustration about receiving targeted advertising**.

Some users using the app for fertility tracking found this **particularly sensitive** as it presented them with advertising related to trying for a baby.



A couple of users felt that they had **explicitly noticed an increase in specific advertising** since using the app, however, most said that they **could not distinguish whether it was the app or other general internet usage** leading to this

*“Anything you input on the phone now informs the algorithm.”*

**Current user, Fertility tracking**

*“I just can't stand targeted advertising. It's unnecessary. It's freaky as well. I'm just like, how? How do you know? Like, yeah, sometimes you ask Google a question or you've spoken to someone about it and next thing you know this pregnancy test is like everywhere on your screen.”*

**Current user, Fertility and period tracking**

*“Ever since downloading the app, my whole algorithm on Instagram changed to couples, fertility etc.”*

**Current user, Fertility tracking**

# There were mixed views on whether they would look into how apps use their data in the future



Mostly, users stated they would **not** look into how their app is using their data.

However, a few were **prompted by the research** to take a look.

A few stated they would be prompted if there was a **news story**.

A few may be prompted to look if there was a **data breach or reason for concern**.

*"I think unless I had to, like a concern, then I would look into it. But if I didn't have any concerns then I wouldn't bother."*

**Current user, Fertility tracking**

*"[This interview] has now made me question, is my data being used elsewhere and so I do have some questions, but I would know what to do."*

**Lapsed user, Fertility tracking**

*"I would be interested, I think especially if you saw something in the news about an app's data breach, then I would be interested."*

**Current user, Fertility tracking**



**No users had previously tried to restrict how their app is using their data and wouldn't know how to. In the focus groups, they stated that they would try 'settings' first.**

# Engagement in privacy policies could be increased by simplifying the language used

When asked how engagement with privacy policies could be increased:



Most users felt that privacy policies are **too long and complicated**, often using legal language which is not easily understood



Respondents said that they would be more likely to engage in privacy policies if the **main points were clearly summarised**, with the option to expand if required



Users would like to know a handful of key things:

- What **specifically their data would be used** for
- Whether it be for **improving the app / trends** or for **targeted advertising**
- Whether their data is **being 'sold' to third parties** and **who** this is
- Some users would also like to know **how to access their data**, as they did not know how to access it if they wanted to

*"It's so long-winded. Like would you actually read a whole document's worth of however many pages? If it was more concise, and you could read a more expanded version if you really wanted to. But it's always just so long that I don't have the time or the mental space."*

**Current user, Fertility tracking**

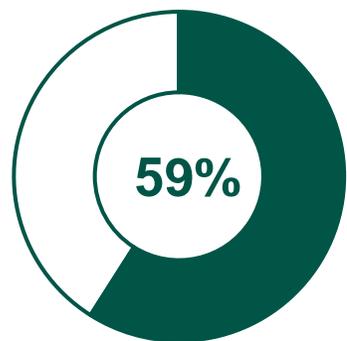
*"I think maybe with the policies they give you... maybe they should say how to access your data if you want to get it... you get to the stage where you click your consent... but I would not have the slightest clue of where or who to approach..."*

**Current user, Period tracking**

# Conclusions

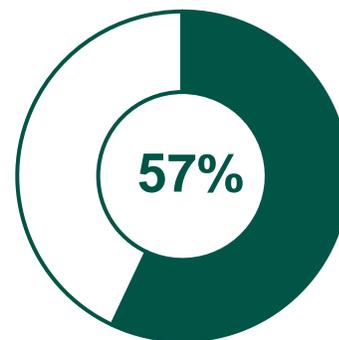


# How do the findings link to ICO's poll of women regarding period and fertility tracking apps?



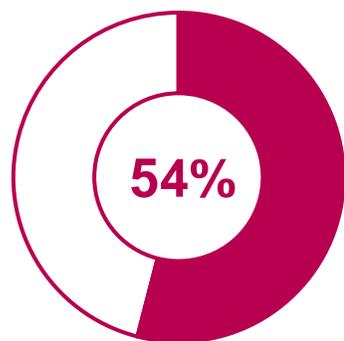
The quantitative survey stated the **transparency** of how data is used is important when choosing an app.

This was not mentioned as a factor in choosing an app in the qualitative research, but when prompted on transparency, there were mixed views on whether apps were transparent or not.



The quantitative survey stated the **security** of how data is used is important when choosing an app.

This was not mentioned as a factor in choosing an app in the qualitative research, and generally was not a concern of users. However, this is based on a specific group of engaged users who had not looked into how their data is used.



Over half of women noticed an **increase in fertility related adverts** since signing up: 17% found these **distressing**.

In the focus groups, some users felt that their 'algorithm changed' when they got the app, and they were seeing more adverts. However, some struggled to attribute it to the app itself as they were also googling related topics.

One of the only areas of concern raised throughout this research was the **insensitivity of getting some of these targeted adverts**

# Conclusions

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**Positive perceptions**

- Users are generally **very positive about using fertility and period tracking apps**, and the **benefits outweigh any concerns** they may have with the app.



**Lack of engagement / concern around privacy and data usage**

- There is **very little concern around how fertility and period tracking apps use data**, with no unprompted mentions of data security or privacy. None of the lapsed users interviewed stopped using the apps due to privacy or data concerns.
- **No users had previously tried to restrict** how their fertility and period tracking apps use their data, and majority felt like they wouldn't know how to even if they wanted to.
- Users are **generally not concerned about the type of information the app holds being 'leaked' or sold to third parties** as it's not identifiable or as sensitive as other apps, such as banking apps, and users were happy to enter lots of personal health information into the app. Most users already assumed that their data was being shared with third parties.

# Conclusions

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**Level of trust and naivety amongst users**

- There is an assumption that apps are **validated as being ‘safe’ by being on the app store**, leading to **low engagement** with privacy policies and how apps use their data. Users are trusting how apps, including period and fertility tracking apps, use their data, with recommendations and ratings on the app store feeding into their lack of concern around data security.
- Level of knowledge regarding how fertility and period tracking apps use their **data is fairly low**, though users make assumptions that the app will use their data for targeted advertising and improving the app itself. However, they noted they would not **expect their name and email address** to be sold.



**Some concern around insensitive ads**

- When prompted, some users were critical of their fertility tracking app using their data for targeted advertising because of **sensitivities around fertility issues**, and others simply found targeted adverts annoying but inevitable.



**Simplicity key for future engagement**

- When prompted, users said they would engage more with information about how apps use their data if it was presented in a **short and simple format**, but many users **don’t have an appetite to investigate** how their data is used.

# Recommendations

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**Provide best practice examples for apps to use in presenting how data is used.** Users stated they would be more engaged if the privacy information was set out in simple bullet points, could ICO advise apps on how best to do this?



**Awareness raising / education piece on what it means that the app is highly rated on the app stores.** Users put their trust in apps when they are on the app store, could there be a wider piece raising awareness of how to best know which apps are treating data securely? Linked to this, there was one suggestion to add an 'ICO approved' sticker to apps, much like 'ATOL protected.'



**Further quantitative research to capture a wider range of user views.** Users who took part in these interviews and focus groups may be more likely to feel happy to openly discuss personal issues and share information. Quantitative research to explore views of users who are perhaps more 'private' could provide further insight.

Some users referenced that their doctors / consultants recommend use of the apps so ICO should keep this in mind when considering these suggestions.