# Public perceptions of a COVID-19 tracking app

*8th June 2020*

## Summary

1. About two thirds of the population who own a smartphone (67%) say they would probably download and use the app. This is about 60% of the whole population.
2. This sample is likely to be more inclined to use an app than the general population, given that, by definition, they are comfortable in disclosing some degree of personal data via an on-line system.
3. About a quarter of the population (23%) do not own a smartphone or do not usually take it out with them.
4. Broadly speaking, people’s views on the app are unidimensional: they think it is a good thing or they do not think it is a good thing. Specific reasons for not liking the app do not stand out.
5. Likelihood to download and use the app (in those who own a smartphone) is strongly correlated with people’s belief in the effectiveness of the app and their belief in their ability to use the app. This likelihood is also correlated with trusting information from the Government, being more worried about coronavirus, taking your smartphone out with you, and younger age.
6. Beliefs in the effectiveness of the app and one’s ability to use the app were notably correlated with feeling more connected to other people, trusting information from the Government, being more worried about coronavirus, and using a smartphone.

## Recommendations

1. The pattern of responses to questions about the app may imply that those who do not like the app will be difficult to persuade as they appear to dislike the whole idea of it.
2. The surveys should drop question 32b (“With this app in mind, to what extent, if at all, you agree or disagree with the following statements”).

We have data from regular polling by DHSC. This document analyses a number of questions that were asked about a COVID-19 app. Data is from waves 15-19 on 10,029 respondents (*i.e.*, from 4 May 2020). We have data on about 2000 respondents each week. Some people have been polled more than once: the number is trivially small from week to week.

Smartphone ownership was only recorded in the latter three waves:

*Do you have a smartphone?*

Yes, and I usually take it out with me: 77%

Yes, but I do not usually take it out with me: 11%

No: 12%

# Beliefs in the effectiveness of a smartphone app to prevent the spread of coronavirus

A question (Q9) was asked about respondents’ belief in the effectiveness of an app: “please tell us to what extent, if at all, you agree or disagree […] An effective way to prevent the spread of coronavirus is to…”

* Use a smartphone app to see whether you have come into contact with someone who has reported symptoms of coronavirus, or tested positive for coronavirus
* Use a smartphone app to record if you have symptoms of coronavirus, so those you may have passed the virus on to can be anonymously notified

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **An effective way to prevent the spread of coronavirus is to…** | **Strongly agree** | **Agree** | **Neither** | **Disagree** | **Strongly disagree** | **Don’t know** |
| Use a smartphone app to see whether you have come into contact with someone who has reported symptoms of coronavirus, or tested positive for coronavirus | 22% | 33% | 28% | 7% | 5% | 6% |
| Use a smartphone app to record if you have symptoms of coronavirus, so those you may have passed the virus on to can be anonymously notified | 22% | 33% | 27% | 7% | 5% | 5% |

The two questions are highly correlated (*r* = 0.78, *p* < 0.001). They were thus combined them into one variable, scored 0-8, with high scores indicating stronger beliefs in the efficacy of apps. (Don’t know responses were excluded.)

We can examine predictors of this score. (Smartphone ownership was only asked in weeks 17-19 reducing the sample size available.) Some variables did predict this score, about 13% of the variance was explained. Predictors (in decreasing order of strength) were:

• feeling more connected to other people

• trusting information from the Government

• being more worried about coronavirus

• owning and taking with you a smartphone

• English being one’s first language

• more financial difficulties

(The financial difficulties item combines: “I am struggling to make ends meet”, “I am skipping meals I would usually have”, and “I am finding my current living situation difficult”. The connectedness item combines: “I keep in touch with family and friends who I don't live with”, “There is enough space in my home for everyone currently living in my household”, “I feel connected to family/friends”, and “I have someone to talk to about my worries”.)

Other variables tested were not independent predictors: gender, pre-existing condition, employment status, socio-economic group, education, ethnicity (White vs. BAME), household size, PHQ4 (possible mental health morbidity), age, knowledge of coronavirus symptoms, or number of outings in the last week (excluding the items added to the survey partway through the period under analysis).

# Beliefs in one’s own ability to use a smartphone app

Another question (Q10) asked respondents’ belief in their ability to use an app: “please tell us to what extent, if at all, you agree or disagree […] How confident are you that, if you wanted to, you could…”

* + Use a smartphone app to see whether you have come into contact with someone who has reported symptoms of coronavirus, or tested positive for coronavirus
  + Use a smartphone app to record if you have symptoms of coronavirus, so those you may have passed the virus on to can be anonymously notified

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **How confident are you that, if you wanted to, you could…** | **Strongly agree** | **Agree** | **Neither** | **Disagree** | **Strongly disagree** | **Don’t know** |
| Use a smartphone app to see whether you have come into contact with someone who has reported symptoms of coronavirus, or tested positive for coronavirus | 27% | 31% | 23% | 8% | 7% | 4% |
| Use a smartphone app to record if you have symptoms of coronavirus, so those you may have passed the virus on to can be anonymously notified | 28% | 31% | 22% | 8% | 7% | 4% |

The two questions are strongly correlated (*r* = 0.85, *p* < 0.001). They were thus combined into one variable, scored 0-8, with high scores indicating stronger beliefs in the efficacy of apps. This item is also strongly correlated with the previous combined item (*r* = 0.61, *p* < 0.001).

We can examine predictors of this number. (Smartphone ownerships was only asked in weeks 17-18, reducing the sample size available.) Some variables did predict this number: about 19% of the variance was explained. Predictors (in decreasing order of strength) were:

• owning and taking with you a smartphone

• feeling more connected to other people

• trusting information from the Government

• being more worried about coronavirus

• younger age

• being in work

• having a larger household size.

Other variables tested were not independent predictors: gender, pre-existing condition, socio-economic group, education, ethnicity (White vs. BAME), PHQ4 (possible mental health morbidity), knowledge of coronavirus symptoms, first language, having financial difficulties, or number of outings in the last week (original items only).

# Attitudes to using the app

Attitudes to using the app were asked in the last three waves (from 18 May), but only for people who said they had a smartphone.

*If it was part of government's approach to easing the lockdown, how likely would you be to download an NHS app tracing the spread of the virus?*

Definitely would: 41%

Probably would: 26%

Not sure: 18%

Probably would not: 7%

Definitely would not: 8%

Responses here were fairly strongly predicted by other variables: we could predict 37% of the variation in this variable. This item was strongly predicted by

* stronger belief in the effectiveness of the app
* stronger belief in in one’s ability to use the app

It was also predicted by (in decreasing order of strength):

* trusting information from the Government
* being more worried about coronavirus
* taking your smartphone out with you
* younger age

A set of questions was then asked about people’s views on an app:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Statement** | **Strongly agree** | **Agree** | **Neither** | **Disagree** | **Strongly disagree** | **Don’t know** | **Not applicable[[1]](#footnote-1)** |
| I think it is important for people to download and use this app | 24% | 37% | 18% | 8% | 5% | 7% | 2% |
| The app is important in helping return to a more normal life | 22% | 39% | 18% | 9% | 4% | 7% | 2% |
| I believe that my data will be held safely and securely | 17% | 32% | 18% | 13% | 9% | 8% | 2% |
| I believe that my data will only be used for its stated purpose | 18% | 32% | 17% | 13% | 9% | 8% | 2% |
| Knowing that many people in my area use the app would make me feel at ease when out and about | 20% | 37% | 20% | 11% | 5% | 6% | 2% |
| The app is important in helping to control the spread of coronavirus | 24% | 40% | 17% | 8% | 4% | 7% | 2% |
| I think this app will benefit my friends and family | 21% | 37% | 18% | 9% | 5% | 8% | 2% |
| I think this app will benefit the NHS | 25% | 40% | 15% | 7% | 3% | 8% | 2% |
| I think other people I know will download this app | 19% | 40% | 16% | 9% | 4% | 10% | 2% |
| I am confident that others will report honestly | 15% | 31% | 21% | 18% | 7% | 8% | 1% |

Don’t know and Not applicable were treated as missing. These 10 variables were investigated using factor analysis. This implies there is one factor explaining 74% of the variance. All the items also correlate strongly with the intention question (*r*s > 0.52). That is, people’s attitudes to the app are broadly pro or anti, and that overall attitude determines how they answer all the questions.

Datasets used:

* Department of Health and Social Care weekly tracker
  + Tracking DHSC marketing, coronavirus attitudes, beliefs, knowledge, reported behaviour, satisfaction with Government response, credibility of Government.
  + Data collected weekly (Monday to Wednesday) since late January.
  + Market research company commissioned: BMG Research.

*Please note that this work has been conducted rapidly, and has not been peer reviewed or subject to normal quality control measures.*

Dr Henry W.W. Potts (UCL), Dr Louise E. Smith (KCL), Professor Nicola T. Fear (KCL), Professor Susan Michie (UCL), Professor Richard Amlȏt (PHE), Dr G James Rubin (KCL)

Contact details: [h.potts@ucl.ac.uk](mailto:h.potts@ucl.ac.uk), [louise.e.smith@kcl.ac.uk](mailto:louise.e.smith@kcl.ac.uk), [richard.amlot@phe.gov.uk](mailto:richard.amlot@phe.gov.uk), [gideon.rubin@kcl.ac.uk](mailto:Gideon.rubin@kcl.ac.uk)

1. Percentages may not add to 100% due to rounding. [↑](#footnote-ref-1)