

People say they would not want to test embryos for traits like low IQ. But if given the information, they act on it

A study of more than 2,000 people in the United States and China finds that the line between medical and non-medical traits, which underpins the rules on embryo testing in most countries, does not match the preferences of the public.

If undertaking artificial fertility treatment, most people say they are more comfortable testing embryos for a disease than for a trait like low IQ or antisocial behaviour. But when they are shown that information and asked to pick an embryo, the distinction largely disappears. They decide not to implant embryos with a raised chance of low IQ or antisocial behaviour about as often as they decide not to implant embryos with a raised chance of heart disease.

That is the finding of a study published today in *Nature Human Behaviour* by researchers at the University of Oxford, the University of Exeter, the Yong Loo Lin School of Medicine, National University of Singapore (NUS), and colleagues in the UK, Canada, China and Australia.

IVF clinics and commercial companies now offer polygenic testing of embryos, which estimates an embryo's chances of developing common conditions such as heart disease or diabetes, and in some cases traits such as height, eye colour or cognitive ability. Most countries have rules that draw a distinction between medical and non-medical uses of embryo selection. Earlier surveys supported that line, finding strong public backing for testing for serious illness and much weaker backing for testing for traits.

The new study separated two things those surveys ran together: whether people want the information, and what they do if they have it.

In a US sample of 1,467 adults, quota-sampled to match the national population, 735 people were asked whether they would test embryos for four attributes. Willingness to test was highest for heart disease at 79 per cent and lowest for vision impairment at 55 per cent, with low IQ at 65 per cent and antisocial behaviour at 58 per cent in between. On average, people were more willing to test for the two medical conditions than for the two non-medical traits.

The other 732 people were instead given information about the genetic properties of pairs of embryos and asked to choose between them. Here the pattern changed. An embryo with an above-average chance of heart disease was 40 percentage points less likely to be picked (compared with one with an average chance). For antisocial behaviour the gap was 36 points and for low IQ 32 points. For vision impairment, a medical condition, it was 19 points, far below both non-medical traits.

The same study run with 623 adults in China produced the same shape of result, with the gaps slightly larger.

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Dr Edmond Awad of the University of Exeter and the Uehiro Oxford Institute, who led the study, said:

"People are uneasy about asking for this kind of information, but they act on it once it is in front of them. Psychologists call that deliberate ignorance. Choosing not to look is not the same as not caring."

Professor Julian Savulescu of NUS Medicine and the University of Oxford, the study's senior author, said:

"Regulation in this area rests on a category. Our results suggest people do not think in categories when the choice is in front of them. If policy is going to track what matters to people, it will have to talk about the effect a condition or trait has on a child's life, not the label attached to it."

Professor Dominic Wilkinson, a neonatologist at the John Radcliffe Hospital and a corresponding author of the study, said:

"This study has important implications for consent for genetic testing in fertility treatment. When deciding whether to undertake testing, prospective parents may find it helpful to reflect not on what they wish to know, but instead, on what information would impact their decisions about embryos.. "

The authors are careful about what the study does and does not show. It measures what people say they would do in hypothetical scenarios, not what they do in a clinic. It covers four attributes, chosen as test cases, rather than the full range of things a test might report. And the scenarios presented every attribute in the same clean format, which flatters the science: polygenic prediction for behavioural traits such as cognitive ability is far weaker within families than these scenarios imply, so the real-world gains from selecting on them would be much smaller.

The study also found that public willingness to test for non-medical traits was higher than earlier work had suggested, with 61 per cent open to it. The authors note that their questions asked about avoiding low IQ and antisocial behaviour, whereas earlier studies asked about selecting for high IQ and prosocial behaviour, and that the difference in wording may account for much of the gap.

The team is now running a larger version of the question through *Tinker Tots* (<https://tinker-tots.net>), an online citizen-science platform, which invites the public to work through embryo selection dilemmas across a wider range of traits and in more countries. The study published today used a separate sample recruited through Prolific.

Visual Abstract

**People are warier of testing embryos for low IQ and antisocial behaviour.
Shown the results, they act on them about as strongly as on heart disease.**

■ Medical condition ■ Non-medical trait

1. Would you test embryos for this?

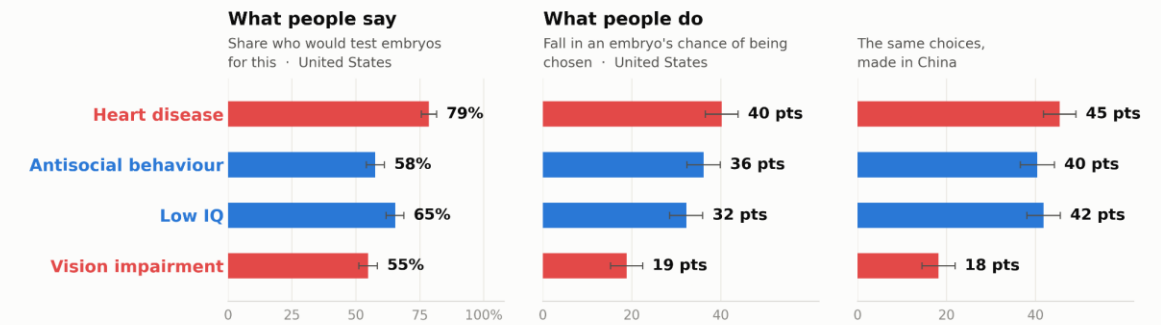
- ☐ Heart disease
- ☐ Vision impairment
- ☐ Low IQ
- ☐ Antisocial behaviour

735 people in the US

2. Which embryo would you implant?



732 people in the US and 623 in China, ten dilemmas each



US sample N = 1,467; China sample N = 623. Bars show means with 95% confidence intervals, clustered by participant. The right-hand panels show the change in the probability that an embryo is chosen, in percentage points, when its chance of the attribute is above average rather than average.

Awad et al., Nature Human Behaviour (2026) · doi.org/10.1038/s41562-026-02562-w · tinkertots.net

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Notes to editors

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Registered Report. The study design, hypotheses and analysis plan were reviewed and accepted by the journal before the data were collected, on 7 October 2025. The results could not be shaped after the fact. Two of the seven preregistered hypotheses were not supported, and both are reported.

Data, code and materials: <https://osf.io/vb9c2>

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Interviews available: Edmond Awad (Exeter and Oxford, UK), Julian Savulescu (NUS, Singapore and Oxford, UK).



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