

On Fertile Grounds: Assessing the Value of Assisted Reproductive Technology

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BACKGROUND

- Limited resources in public health systems.
- Rapidly increasing demand for assisted reproductive technology (ART).
 - 'Involuntary childlessness'**
 - Medical infertility (e.g. anatomical, hormonal)
 - Social infertility (e.g. same sex couple, single)
- Conflicting ethical debate: *how* to justify ART funding through the healthcare budget? Is infertility a *disease*? Is there a *right* to reproductive assistance?
- Inconsistent funding provision and eligibility criteria for ART globally and across the UK → many unable to access what they deem an incredibly valuable life project.
- Cost-effectiveness analyses used to determine funding allocation may not appropriately value ART; quality-adjusted life years (QALYs) reflect [years of life x health-related quality of life].
- Considering non-health-related outcomes (e.g. individual & societal wellbeing) may be required to represent the broader value of ART.
- Approach to justifying state-funding ART on the grounds of alleviating the harm caused by involuntary childlessness (individual suffering and disruption to valued life projects).
- No existing studies explore public attitudes towards the health/non-health value derived from ART.

What do the public find valuable about ART when making judgements about allocating its state funding?

Aims

- Explore public intuitions regarding *what* is valuable about ART, in terms of both disease amelioration and wider happiness benefit.
- Use empirical findings with ethical analysis to test the claim that current evaluation methods are inadequate for reflecting the broader value of ART.

Hypothesis

- That the extent of value attributed to ART by the public may not be captured by current funding models.
- That non-health benefits of ART may predict public support of funding independently of disease amelioration.

METHODOLOGY

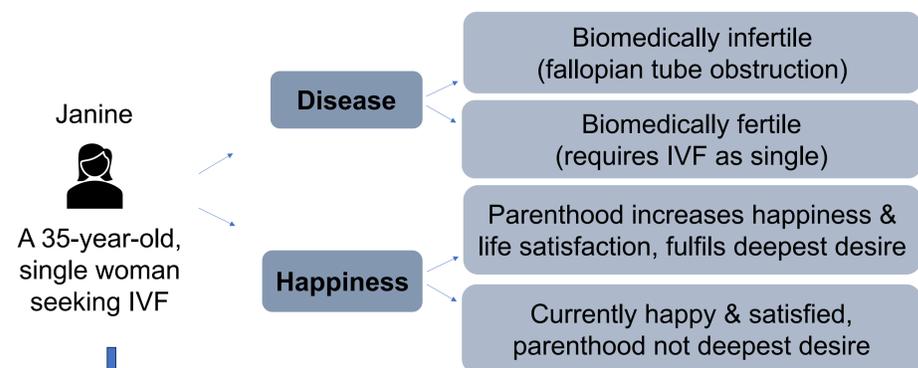


Survey Design

200 UK participants recruited to an online, quantitative survey; 26 excluded for failing attention/comprehension checks

Randomised to an experimental vignette in which IVF provides either:

- Disease amelioration & happiness benefit
- Disease amelioration only
- Happiness benefit only
- No disease amelioration & no happiness benefit



Willingness-to-fund Janine's IVF through the NHS elicited using a 7-point Likert scale (from completely against → completely in favour)

Background attitudes towards ART & demographic information collected

FINDINGS

Public willingness to support both disease *and* broader wellbeing improvements

83% supported state-funding IVF for both disease and happiness benefit, 48.8% for happiness benefit only, 40.9% for disease amelioration only, 21.4% for benefit to neither.

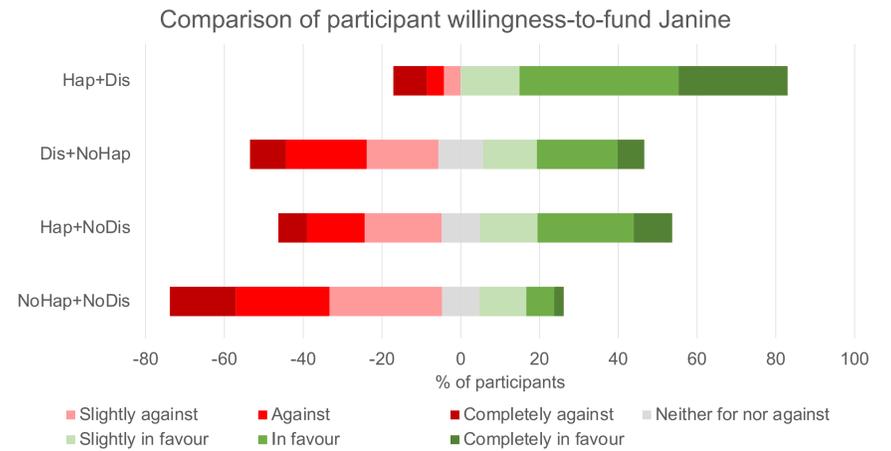


Figure 1: Stacked proportion distribution of willingness-to-fund per condition

Disease-amelioration led to a significantly higher mean willingness-to-fund, as did the presence of a happiness-benefit, independently of each other.

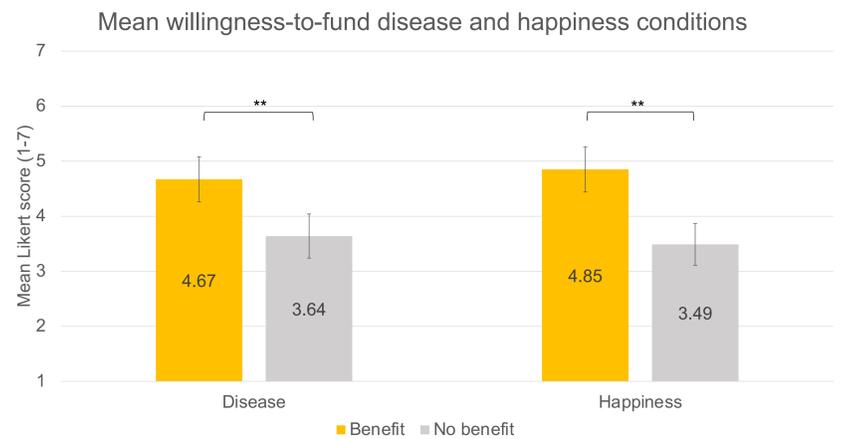


Figure 2: Mean participant willingness-to-fund each condition. Error bars represent 95% confidence intervals, ** indicates significant difference at $p < .01$

Background attitudes that recognised the impact of involuntary childlessness on wellbeing were also significant predictors of participant willingness-to-fund.

CONCLUSION

- Novel perspective: the public value *both* disease-amelioration and wellbeing-benefits in ART funding decisions.
- Suggests allocating resources on QALYs alone does not adequately reflect the wider value of ART.
- Supports claims made in bioethical and health economic literature.
- Applying Collective Reflective Equilibrium in Practice (1), these findings have normative weight and should inform decision-making.
- Contributes to discussion of looking beyond disease, prompting re-evaluation of cost-effectiveness analysis to account for wider wellbeing outcomes.

Implications:

- Considering non-health benefits would:
 - Increase ART cost-effectiveness → increased funding allocation.
 - Enable greater accessibility to those with social infertility.
- Application to other areas of healthcare.
- Implementation will pose practical and ethical challenges → further work required to incorporate non-health values into health technology assessments.

Future directions:

Survey larger, representative samples; conduct focus groups; trade-offs between other medical/non-medical goods; investigate relative value of disease amelioration to happiness benefit; explore threshold measures for wellbeing benefit

References:
 1. Savulescu J, Gyngell C, Kahane G. Collective Reflective Equilibrium in Practice (CREP) and controversial novel technologies. *Bioethics*. 2021;35(7):652-63.

