P-721 Probability of receiving assisted reproductive technology treatment through out-of-pocket payment and household income: A discrete choice experiment in Japan

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Study question: What is the probability that patients will receive assisted reproductive technology (ART) treatment based on their out-of-pocket payment and income class?

Summary answer: Higher-income patients opted for ART even at a higher cost, whereas an out-of-pocket payment was the most influential determinant in all income groups.

What is known already: Economic disparities affect access to ART treatment in many countries. At the time of this survey, Japan provided partial reimbursement for ART treatment exclusively for those in low- or middle-income classes due to limited governmental budgets. However, the optimal financial support by income class is unknown.

Study design, size, duration: We conducted a discrete choice experiment (DCE) in Japan in January 2020 including 824 women with fertility problems who were recruited via an online social research panel.

Participants/materials, setting, methods: Participants included women aged 25–44 years undergoing fertility diagnosis or treatment. They completed a DCE questionnaire including 16 hypothetical scenarios, created by orthogonal design, to measure six relevant ART attributes (pregnancy rate, risk of adverse effects, number of visits to outpatient clinics, consultation hours, kindness of staff, and out-of-pocket expense) and their relation to treatment choice. We used mixed-effect logistic regression models to estimate the probability of receiving ART treatment for each attribute.

Main results and the role of chance: Of the 1,247 eligible women recruited, 824 completed the survey (66% participation rate). All six attributes significantly influenced treatment preference, with participants valuing out-of-pocket payment the most, followed by pregnancy rates and kindness of staff. The odds ratios of each attribute to receiving ART treatment were 0.58 (95% confidence interval [CI]: 0.57−0.59) for out-of-pocket payments per additional 100,000 Japanese yen (JPY; i.e., 800 euros), 1.47 (95% CI: 1.43−1.53) for pregnancy rates per additional 5%, and 4.16 (95% CI: 3.73−4.64) for kindness of staff, after adjusting for clinical and socioeconomic factors. Significant interactions occurred between high household income (≥8 million JPY) and high out-of-pocket payment (≥500,000 JPY). However, the mean predicted probability of the highest-income patients (i.e., ≥10 million JPY) to receive ART treatment at the average cost without public funding (i.e., 400,000 JPY) was 47% (interquartile range: 18%−76%), whereas that of middle-income patients (i.e., 6–8 million JPY) to receive ART at the average subsidized cost (i.e., 100,000 JPY) was 60% (interquartile range: 33%–88%).

Limitations, reasons for caution: Other attributes not included in our DCE scenarios might be relevant in real-life settings. Choices made in a DCE would not wholly match the actual treatment choices.

Wider implications of the findings: The present DCE suggested that out-of-pocket payment was the primary determinant in patients' ART decisions. High-income patients were more likely to receive ART treatment even at a high cost, but their ineligibility for government financial support due to their high income might discourage them from receiving treatment.

Trial registration number: NA