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The Role of Artificial Intelligence in Assisted Reproduction Technologies: Insights from Canadian Patient Perspectives

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INTRODUCTION

- The integration of Artificial Intelligence (AI) into Assisted Reproductive Technologies (ART) has introduced new opportunities for clinical decision-making
- However, little is known about patient perceptions of this evolving technology, particularly in the fertility care context where AI applications are increasingly being explored

AIM

To explore Canadian patient perceptions, expectations, and concerns regarding the use of AI in fertility care and its role in supporting clinical decisions throughout the IVF journey

METHOD

DESIGN: A qualitative study using semi-structured interviews.

Participants: 20 Canadian patients were recruited via social media advertising and had undergone fertility treatment (IVF, oocyte cryopreservation and/IUI) within the last 2 years

Interviews: One-on-one online interviews via Microsoft Teams, each lasting up to 60 minutes. Interviews were transcribed verbatim from video- and audio-recordings.

Pre-determined open-ended questions to explore patients' knowledge, attitudes, & trust in AI-assisted fertility care.

Data analysis: Thematic analysis followed Braun and Clarke's six-phase approach: data familiarization, initial coding, theme generation, theme review, theme definition, & reporting. Results were reported in accordance with the Consolidated Criteria for Reporting Qualitative Research (COREQ) guidelines.

RESULTS – 4 MAJOR THEMES EMERGED:

Key Factors Influencing IVF Clinic Selection and Experience

Participants emphasized compassionate, personalized care, the clinic's reputation, physicians' expertise, transparent and affordable pricing, and continuity of care

Expectations for AI-Supported Fertility Care

Formal informed consent (even with anonymized data), clinician-mediated decision-making, active patient involvement (especially when AI and clinician recommendations diverge) a proven track record of AI accuracy, and review of AI results with clinicians

Perceived Benefits of AI

A tool that improves workflow efficiency and reduces human error in fertility care. It enables personalized, data-driven recommendations, optimizes protocols and timing, standardizes assessments, reduces subjectivity, sets clearer patient expectations, and empowers patients with better access to information

Concerns and Determinants of Trust in AI

Data privacy, risks of breaches, AI's lack of contextual awareness, reduced human interaction, and potential data misuse. Trust in AI depended on clinician endorsement, transparency, regulatory oversight, and adherence to ethical standards.

CONCLUSIONS

- While Canadian **patients view AI as a promising adjunct** in fertility care, they **emphasize the irreplaceable role of human clinicians in** delivering **personalized, empathetic, & ethical care**
- **Successful AI** integration should **prioritize transparency**, **clinician-patient dialogue**, and **robust data protection** measures to foster trust
- These findings offer actionable insights for **fertility clinics** to **enhance informed consent** processes, **incorporate AI education** into patient counseling, and establish **clear guidelines for AI-assisted decision-making**

HELP US SHAPE THE FUTURE OF AI IN FERTILITY CARE

- **Share your views in our 15-min survey!**

Phase 2 (survey) aims to better understand the themes highlighted in these Phase 1 interviews

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REFERENCES

1. Yu, K. H., Beam, A. L., & Kohane, I. S. (2018). Artificial intelligence in healthcare. Nature biomedical engineering, 2(10), 719–731. https://doi.org/10.1038/s41551-018-0305-z
2. Dimitriadis, I., Zaninovic, N., Badiola, A. C., & Bormann, C. L. (2022). Artificial intelligence in the embryology laboratory: a review. Reproductive biomedicine online, 44(3), 435–448. https://doi.org/10.1016/j.rbmo.2021.11.003