

Reproductive Pathways Across the Lifespan and Their Mental Health Impacts

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Abstract

Reproductive health unfolds across the lifespan, and individuals may move through diverse pathways – including infertility, chronic gynecologic conditions such as endometriosis, pregnancy complications, assisted reproduction or gestational carriage. These experiences can heighten vulnerability to new-onset or recurrent mental illness. Using population-based ICES data, our recent work demonstrates that mental health risks arise across the entire reproductive trajectory. Integrating mental health support within fertility care, gynecology, obstetrics and primary care is essential for equitable and person-centred reproductive health in Canada’s universal healthcare system.

Introduction

Reproductive experiences vary widely – from infertility and pregnancy complications to chronic conditions such as endometriosis and pathways such as gestational carriage – but each carries meaningful mental health implications. ICES population-based studies show that psychological vulnerability can arise at any point in these journeys, whether related to infertility treatment, severe maternal morbidity, the chronic burden of endometriosis or the unique pressures faced by gestational carriers. Viewing these reproductive pathways together highlights the importance of integrating mental health support across the entire spectrum of reproductive care.

Population-Based Insights: Linking Reproductive and Mental Health

In one of the largest cohort studies of its kind, we examined over 780,000 births in Ontario between 2006 and 2014 to assess whether infertility or its treatment predisposed individuals to postpartum mental illness (Dayan et al. 2022). Compared with unassisted conceptions, those with subfertility or fertility treatment had a modest but significant increase in mental illness within the first postpartum year. Importantly, the risk extended across all treatment modalities – from ovulation induction to in vitro fertilization (IVF) – suggesting that

psychological stress may stem less from treatment intensity and more from the cumulative burden of infertility itself.

Infertility, Pregnancy Complications and Mental Health

Pregnancy complications represent a critical intersection between reproductive health and mental health. Our population-based ICES studies have shown that infertility and its treatments are associated with a higher risk of adverse obstetric outcomes, including preterm birth, multifetal pregnancy, Caesarean delivery and severe maternal morbidity (SMM) (Dayan et al. 2019; Richmond et al. 2022; Velez et al. 2024a; Wang et al. 2022). SMM, in particular, has profound implications beyond the immediate perinatal period. A recent study by members of our group indicates that women who experience SMM are at increased risk of developing new-onset mental illness, highlighting the continuum between physical and psychological trauma during and after pregnancy (Blackman et al. 2024).

Endometriosis: The Pain-Infertility-Mind Connection

Endometriosis is a chronic, multisystemic inflammatory condition characterized by the presence of endometrial-like tissue outside the uterus, affecting about 10% of reproductive-aged women. It is associated with fibrosis, aberrant angiogenesis and infertility – often requiring fertility treatment – and may independently result in adverse pregnancy outcomes (Velez et al. 2022; 2024c). Beyond its physical and reproductive sequelae, endometriosis provides another lens into the intersection between chronic gynecologic conditions and mental health. In a recent study, women with endometriosis were about 30% more likely to develop a mental illness compared with matched controls (Thiel et al. 2024). The risk was highest within the first year after diagnosis – precisely when individuals often confront chronic pain, uncertainty about fertility and disruptions to work and relationships.

Building on these findings, another study reported that individuals diagnosed with endometriosis had a 42% higher

risk of self-harm, overdose or suicide compared with matched controls (Thiel et al. 2025). Importantly, this elevated risk was most evident among those with no or minimal prior psychiatric care, suggesting that the psychological impact of a new endometriosis diagnosis may be particularly acute in patients without established mental health support.

Gestational Carriers: The Unseen Psychological Toll

Important mental health disparities emerge among gestational carriers – individuals who carry pregnancies for others. Despite rigorous pre-screening and psychological evaluations before surrogacy arrangements, our recent study found that gestational carriers had a 30–40% higher risk of developing a new mental illness compared with both unassisted and IVF conceptions (Velez et al. 2025). The reasons might be multifactorial: emotional separation after delivery, evolving relationships with intended parents, societal scrutiny, pregnancy complications (Velez et al. 2024b) and potential lack of long-term support once the clinical and contractual aspects of surrogacy conclude.

A Continuum of Vulnerability

Taken together, these studies reveal that mental health challenges in reproductive care are not confined to a single condition or stage. Rather, they form a continuum of

vulnerability – spanning reproductive conditions including endometriosis, infertility, assisted reproduction and pregnancy outcomes. From a health system perspective, these findings offer the following important lessons:

1. *Screen early, screen often:* Routine mental health screening should be embedded within fertility and gynecology clinics, not only postpartum.
2. *Integrate care pathways:* Fertility programs, obstetric services and primary care should adopt collaborative models with mental health professionals.

Bridging Research and Policy

Population-based data from ICES uniquely position Canada to inform global dialogue on reproductive and mental health policy. These datasets enable identification of at-risk populations, evaluation of service gaps and monitoring of long-term outcomes across reproductive life stages.

Looking Ahead

As reproductive pathways diversify and treatments become more accessible, supporting mental health across infertility, chronic conditions, pregnancy complications and gestational carriage is essential to achieving equitable, person-centred care in Canada. **HQ**

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