

# Study reveals disparities between male and female surgical residents in the experiences of pregnancy and parenthood

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In a new study led by investigators from Massachusetts General Hospital that surveyed more than 80% of all surgical residents in the United

States, females were more likely to suffer obstetric complications and postpartum depression than male residents' partners.

Female residents were also more likely to experience [pregnancy](#) /parenthood-related mistreatment than male residents, and such mistreatment was associated with burnout, thoughts of leaving the profession, and thoughts of suicide. The findings are [published](#) in *JAMA Surgery*.

"This study is the most comprehensive assessment of the experience of pregnancy and parenthood in any specialty training program to date. Although many training programs have achieved gender parity, gender disparities related to the experience of parenthood during general surgery residency persist," said senior author Erika Rangel, MD, MS, an acute care and gastrointestinal surgeon and the Associate Program Director for the General Surgery residency at Massachusetts General Hospital.

"This study highlights the magnitude of parental discrimination and adverse maternal health outcomes in surgical training, providing evidence that pregnancy during clinical training involves measurable risks. Consequently, improving support is essential for advancing gender equity."

For the study, 5,692 residents from 325 US general surgery programs provided survey responses, with 957 residents (16.8%) reporting a pregnancy (for themselves or their partner) during [clinical training](#) (22.3% male and 10.2% female). Responses revealed that compared with male residents, female residents were more likely to delay having children due to training (46.8% vs. 32.8%) and experience pregnancy/parenthood-based mistreatment (58.1% vs. 30.5%). Female residents had a 42% higher odds of experiencing obstetric complications and a 63% higher odds of developing [postpartum depression](#) compared

with male residents' partners.

Pregnancy/parenthood-based mistreatment was linked with a 2.0-times higher odds of experiencing burnout and a 2.5-times higher odds of having thoughts about leaving the profession. Postpartum depression—whether in female residents or male residents' partners—was linked with a 1.9-times higher odds of burnout, a 2.3-times higher odds of thoughts of leaving the profession, and a 5.6-times higher odds of thoughts of suicide.

"These data are a compelling call to action for our profession. In the American College of Surgeons Board of Governors, I co-chair a workgroup focusing on pregnancy complications and infertility in surgeons. To safeguard maternal-fetal health, we developed recommendations for restricting 24-hour and overnight call for surgeons during the third trimester," said Rangel.

The statement was issued by the American College of Surgeons in mid-May and has been endorsed by the American Board of Surgery, American Board of Colon and Rectal Surgery, American Board of Neurological Surgery, American Board of Oral and Maxillofacial Surgery, American Board of Plastic Surgery, and American Board of Thoracic Surgery.

Rangel noted that next steps include pushing for national advocacy for maternal health support across all specialties, for both trainees and practicing physicians and surgeons, and extending research beyond "talking about the challenges" to finding solutions.

"Rigorous research is needed to understand which interventions are helpful and how much they impact meaningful measures of well-being. For example, we are conducting a clinical trial, The 4th Trimester Initiative, that aims to understand whether a package of support for

pregnant and postpartum medical and surgical trainees can reduce burnout, postpartum depression, and career dissatisfaction," said Rangel.

**More information:** Ruoja Debbie Li et al, Pregnancy and Parenthood Among US Surgical Residents, *JAMA Surgery* (2024). [DOI: 10.1001/jamasurg.2024.2399](https://doi.org/10.1001/jamasurg.2024.2399)

Provided by Massachusetts General Hospital

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