
Impact of Procedural Training on Pregnancy Outcomes and Career Satisfaction in Female Postgraduate Medical Trainees in the United States



Jennifer S Davids, MD, FACS, Rebecca E Scully, MD, MPH, Nelya Melnitchouk, MD, MSc, FACS

- BACKGROUND:** Compared with nonprocedural fields, procedural specialization requires longer training, less flexible schedules, and greater physical demands. The impact of these factors on pregnancy, maternity outcomes, and career satisfaction has not been well described.
- STUDY DESIGN:** Data were gathered from 738 US postgraduate medical trainee mothers via an anonymous, IRB-approved online survey. Univariate analysis was performed using chi-square tests. A logistic regression model was used to investigate the impact of procedural training on odds of assisted reproduction use and pregnancy complications, adjusting for age at first pregnancy.
- RESULTS:** Of the 738 respondents, 221 (30.0%) were in procedural fields. A greater percentage of procedural trainees were more than 30 years old at the time of first pregnancy (52.9% vs 43.1%; $p = 0.01$). Controlling for maternal age, procedural trainees were significantly more likely to require assisted reproduction (odds ratio [OR] 1.28; 95% CI 1.01 to 1.61; $p = 0.04$), and trended toward increased odds of prolonged time to conceive (OR 1.62; 95% CI 0.99 to 2.65; $p = 0.06$). After delivery, procedural trainees also had higher adjusted odds of shorter maternity leave (OR 1.52; 95% CI 1.06 to 2.18; $p = 0.03$) and were significantly more likely to report a desire to have chosen a less demanding specialty or job (OR 1.95; 95% CI 1.40 to 2.72; $p < 0.001$).
- CONCLUSIONS:** Procedural trainees have higher rates of assisted reproduction, shorter maternity leave, and are ultimately more likely to express career dissatisfaction. These findings illustrate the need for adequate support for trainee mothers, particularly in procedural specialties. (J Am Coll Surg 2017;225:411–418. © 2017 by the American College of Surgeons. Published by Elsevier Inc. All rights reserved.)
-

More women are becoming physicians in the US. Even though only 30.4% of physicians in the US are women, half of 2016 medical school matriculates are women.¹ More women are entering postgraduate medical training programs, and now 41.6% of all ACGME-accredited trainees are female. Considerable variation in the percentage of women still exists between different specialty training programs, with the highest percentages in obstetrics/gynecology (81%), pediatrics (72.7%), and endocrinology

(66.7%), and the lowest percentages in orthopaedic surgery (13.2%), neurosurgery (13.9%), and thoracic surgery (19%).²

Previous small studies suggested that most female physicians historically have chosen to delay childbearing until completion of training, particularly in male-dominated specialties.^{3,4} Our previous work demonstrated that, of early career physician mothers who became pregnant after completing their training, those in procedural specialties were more likely to wish they had chosen a less demanding job or specialty, compared with their nonprocedural peers.⁵ We also demonstrated that, regardless of specialty, women who have children while in practice experience high rates of preterm labor, cesarean section, and pregnancy-related complications compared with the general population, even when controlling for age.⁶

As more women are becoming physicians, more are also deciding to have children during postgraduate training.⁷ There is considerable variation in maternity leave policy

Disclosure Information: Nothing to disclose.

Presented at the Academic Surgical Congress 12th Annual Meeting Las Vegas, NV, February 2017.

Received April 10, 2017; Revised May 25, 2017; Accepted May 25, 2017. From the Departments of Surgery, University of Massachusetts Medical School, Worcester, MA (Davids) and Brigham and Women's Hospital, Harvard Medical School, Boston, MA (Scully, Melnitchouk).

Correspondence address: Jennifer S Davids, MD, FACS, University of Massachusetts Memorial Medical Center, 67 Belmont St, Suite 201, Worcester, MA 01605. email: Jennifer.Davids@Umassmemorial.org

Abbreviations and Acronyms

IUI = intrauterine insemination
OR = odds ratio
PMG = Physician Moms Group

between different training programs under the American Board of Medical Specialties, and many specialties do not have a set policy.⁸ Accordingly, a recent survey of 66 US general surgery program directors found that one-third lacked a maternity leave policy, and 61% believed that becoming a parent negatively affects female trainees' work and well-being.⁹ Further, the Flexibility in Duty Hour Requirements for Surgical Trainees (FIRST) trial demonstrated that female mid-level residents were significantly more likely than their male peers to feel dissatisfied with their overall well-being and to perceive negative effects on duty hours on time for family.¹⁰ Moreover, multiple studies have established that women in surgical specialties have lower career satisfaction compared with their male counterparts.¹¹⁻¹³

To date, there has not been a systematic nationwide study of the personal and professional issues relating to pregnancy, maternity leave, and career satisfaction among postgraduate medical trainees across all specialties in the US. We hypothesized that trainees in procedural specialties face greater challenges given the longer duration of training, the decreased capacity for scheduling flexibility, and increased physical demands of the job.¹⁴⁻¹⁷ To address these questions, we used social media to recruit a large, representative cohort of female physicians in the US who have had children during medical training.

METHODS

The study protocol was reviewed by the institutional review boards of both the University of Massachusetts Medical School and Partners/Brigham and Women's Hospital and was granted exemption. A 45-question multiple choice survey was created and posted online using a secure website (eDocument 1). The survey was formatted for compatibility on computers as well as portable devices such as tablets and smartphones. Respondents were anonymous and IP addresses were tracked to prevent duplicate entries by the same participant.

Participants were recruited by posting a link to the survey on the Facebook page of the Physician Moms Group (PMG), which is a social media organization exclusively for physician mothers. Membership in PMG is free, self-selected, and voluntary, and physician status is confirmed by the organization's administrators. The link was posted

on PMG on April 28, 2015 and the survey remained open for 4 weeks. The survey was open to all female physicians in the US; however, for the purpose of this analysis, the study cohort consisted of only those who had a child during postgraduate clinical medical training in a US program, which included internship, residency, or fellowship.

The following specialties were defined as procedural: all surgical specialties, anesthesiology, gastroenterology, and obstetrics/gynecology; all other specialties were considered non-procedural. Prolonged time to conceive was defined as more than 1 year for women less than 35 years old, and more than 6 months for women 35 years or older.¹⁸ Short maternity leave was defined as less than 6 weeks for vaginal delivery and less than 8 weeks for cesarean delivery, based on the recommendations issued by the American College of Surgeons.¹⁹

Bivariate analysis was performed using chi-square tests. For adjusted analysis, a logistic regression model was created to evaluate the impact of procedural vs nonprocedural training on pregnancy outcomes, adjusting for age at first pregnancy, based on its known impact on pregnancy outcomes²⁰ and on bivariate testing. For survey elements regarding career satisfaction and perception of support, odds ratios are unadjusted. A 2-sided p value < 0.05 was used to determine statistical significance. All analyses were performed using STATA 14.1 software (StataCorp).

RESULTS**Demographics**

Membership in PMG at the time the study was posted was 14,518. A total of 2,363 subjects completed the survey, which represented 16.3% of the total group membership. Of those responding, 738 indicated that they were in internship, residency, or fellowship during their most recent pregnancy and therefore were eligible for inclusion in the analysis. Respondents were from every state except Idaho, Wyoming, and Alaska (Fig. 1A). Of the 738 individuals included the current analysis, 221 (30.0%) were in procedural fields (Fig. 1B). There was no significant difference between procedural and nonprocedural trainees with respect to race, marital status, or the percent with a spouse who worked full-time (Table 1). Overall, 96.9% of respondents were married, and more than half had spouses who were employed full-time. Nonprocedural trainees were more likely than procedural trainees to be married to a physician (30.5% vs 22.5%; $p = 0.03$), yet procedural trainees were more likely than nonprocedural trainees to be married to a surgeon (9.6% vs 5.3%; $p = 0.03$).

Maternal age and use of reproductive assistance

In univariate analysis, a significantly higher proportion of trainees in procedural fields were more than 30 years old

Download English Version:

<https://daneshyari.com/en/article/5733047>

Download Persian Version:

<https://daneshyari.com/article/5733047>

[Daneshyari.com](https://daneshyari.com)