

INFERTILITY AND PREGNANCY OUTCOMES AMONG OBGYN PHYSICIANS AND THEIR OPINIONS REGARDING ASSISTED REPRODUCTIVE TECHNOLOGY

Authors: Johnson Sarah MD, Kinsey Chantal MPH, Dwyer Darby BS, Goodner Caroline MD, Mucowski Sara MD

Affiliations: Department of Ob/GYN, Baylor University Medical Center Dallas, TX

Background: Infertility is defined as the inability to conceive after 1 year of having sexual intercourse without the use of any birth control method in women less than 35 years old. After the age of 35, this definition shortens to the inability to conceive after 6 months of having unprotected sexual intercourse. According to the CDC, among married women aged 15 to 49 years in the U.S. with no prior births, about 1 in 5 (19%) experience infertility¹. The average age of childbearing is also increasing in the U.S., with the average age of first live birth increasing from 21.4 to 26.3 from 1970 to 2014². In the specific population of female surgeons, the inevitable time commitment that medical training necessitates impacts family planning and fertility outcomes. Multiple studies have shown that female surgical residents have higher rates of miscarriage, use of assisted reproductive technology (ART) and pregnancy complications^{3,4}, thought to be related to delayed pregnancy, fixed night shifts and longer work hours.

Objective: The purpose of this study is to evaluate fertility and pregnancy outcomes in female OB/GYN physicians and identify potentially modifiable risk factors and barriers to fertility in this population.

Materials/Methods: Survey questions were provided by a previously published study "Incidence of infertility and pregnancy complications in US Female Surgeons" with additional questions on the use of assisted reproductive technology (ART)³. The survey was self-administered and distributed to reputable women's health organizations via email and social media platforms from Feb-April 2023. OB/GYN residents, fellows and graduates from ACGME accredited programs were included. Descriptive statistics, frequencies and percentages were used to describe demographics and categorical variables. Means and standard deviations were used to describe continuous variables. A chi-square test was used to test for associations in bivariate comparisons. A two-sample t-test was used to test for associations between continuous variables in bivariate comparisons. A p value of 0.05 was used for statistical significance. All analyses performed in SAS 9.4.

Results: 305 surveys met inclusion criteria. Average age of first child was 32.28 years old which is much older compared with 26 years for the general US population. Over 33% of responders received a diagnosis of infertility. 40% of responders reported experiencing at least one miscarriage. 38% of responders used some form of ART vs 12.2% of women in the general population. 60% of respondents stated they would use ART if diagnosed with infertility, 20% were undecided and 20% stated they would not use ART.

Conclusion: OB/GYN residents, fellows and physicians have increased rates of infertility, miscarriage and use of ART. Some contributing factors are thought to be delayed childbearing, long work hours and working night shifts and long operating room hours during pregnancy. Further topics for consideration include ART coverage in residency/fellowship and limiting work load and night shifts during pregnancy.

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References

1. CDC. Infertility. *CDC*. Last updated 12/7/22. Accessed 5/15/23.
<https://www.cdc.gov/nchs/fastats/infertility.htm>.
2. Mathews, T. J., & Hamilton, B. E. (2016). Mean age of mothers is on the rise: United States, 2000–2014. *NCHS Data Brief* (232), 1–8.
3. Rangel, E et al. Incidence of infertility and pregnancy complications in US female surgeons. *JAMA Surgery*. 2021;156(10):905-15.
4. Cai C, Vandermeer B, Khurana R, et al. The impact of occupational shift work and working hours during pregnancy on health outcomes: a systematic review and meta-analysis. *Am J Obstet Gynecol*. 2019; 221(6):563-576.doi:10.1016/j.ajog.2019.06.051