

WHO IS SEEKING TREATMENT AT IVF CENTERS? IMPLICATIONS FOR DESIGN OF STUDIES EVALUATING THE GENETIC BASIS OF INFERTILITY

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Introduction: Studies demonstrating the impact of genetic variants on infertility have been limited by sample size, inconsistent design, and low numbers of examined variants and clinical variables. We designed a large-scale study minimizing these limitations to determine the clinical applicability for fertility patients. We compared characteristics of enrolled patients with fertility populations to ensure the validity of multifactorial analyses investigating genetic links to infertility.

Methods: Gender, age, and ethnicity were compared between 6597 individuals from fertility centers and 801 study participants. Student T-tests analyzed statistical differences between the two groups, with a p-value of p0.05 considered significant. Documented informed consent was obtained.

Results: Gender breakdown of study participants (61% female) and fertility patients (71%) did not differ significantly (p=0.183). The mean age (years old) of study participants (34.2) and fertility patients (34.3) was not statistically different (p=0.816). However, the overall ethnic makeup of study and fertility subjects differed significantly (p=0.021). The study has a larger number of Latin American (19.6% versus 11.6%) and South Asian (8.8% versus 3.6%) individuals, and fewer Jewish individuals (6.1% versus 13.7%), compared to the general fertility population.

Conclusions: It is critical to control for demographic characteristics to ensure a study population representative of the indicated population. We observed both similarities and differences between our study population and a general fertility population. Ethnic influences will need to be considered when analyzing any identified links between genetic findings and fertility diagnoses.