

Needle Anxiety in Patients Pursuing IVF: How Big of an Issue Is It?

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Objective: Ovarian stimulation for in-vitro fertilization (IVF) requires daily subcutaneous injections as the medications are not orally active. Needle phobia has not been previously quantified amongst infertility patients, for whom anxiety is a common comorbidity. The objective of this study was to assess the prevalence of needle anxiety among patients pursuing IVF as well as to compare it to other potential anxieties involved in the IVF process.

Methods: A deidentified survey was administered to patients undergoing IVF in March and April 2024 at a single center. The survey collected demographic information, the Injection Phobia Scale-Anxiety (IPS-Anx) short form, which is a validated 8-item instrument that quantifies injection fear on a Likert scale (0-no anxiety to 4-maximum anxiety). Several other questions assessing the extent of needle-related anxiety in IVF on the same Likert scale were included. Linear regression was used to evaluate associations between patient characteristics and IPS-Anx scores.

Results: 102 patients completed the survey. 64% of patients were 30-40 years of age, most were White (37.1%) or Asian (33.7%), and 83.5% had a Bachelor's degree or higher. 34 (33.7%) patients reported that needles factored into their decision to undergo IVF, and 19 (18.6%) patients reported treatment delays due to fear of needles. The mean IPS-Anx score was 12.7 (standard deviation (SD) 7.7). 21 (20.6%) patients scored 20, indicating potential symptoms of a true phobia. IPS-Anx score did not significantly differ by age, race, income, educational level, or prior IVF cycle ($P=NS$, all), but it was significantly correlated with patients' reported anxiety over injecting themselves for IVF ($P<0.001$). Injection-related anxiety was the third most significant IVF-related anxiety for patients (mean 2.37 (SD 1.25)) after number of eggs/embryos (mean 3.26 (SD 0.82)) and cost (mean 2.92 (SD 0.93)) but superseded anxieties regarding blood draws, anesthesia, vaginal ultrasounds, and time commitment. Medication errors and seeing blood were the two most common fears associated with injections. 48% of patients had previously undergone IVF; 22.8% reported that needles were initially bothersome but they eventually got accustomed to them, while 15.8% stated that injections remained bothersome to them the entire time. 23.6% reported that needles factored into their decision to undergo another cycle.

Conclusions: Needle anxiety is highly prevalent in the IVF population; self-injection factored into decision making over a third of patients' decision considering pursuing IVF, with treatment delays in nearly 20% of all patients. Needle-related anxiety should be addressed to improve patient experience and satisfaction as well as to lessen the likelihood of treatment drop out.

Impact statement: Needles and injections are a commonly overlooked but significant source of anxiety for IVF patients that can cause treatment delays and contribute to treatment dropout.