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Retractions in the Journal of Infertility and Reproductive Biology: Causes and implications

Amin Tamadon[1,2]*

1. Department of Natural Sciences, West Kazakhstan Marat Ospanov Medical University, Aktobe, Kazakhstan
2. Stem Cells Technology Research Center, Shiraz University of Medical Sciences, Shiraz, Iran

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Abstract

Retractions are essential in the scientific literature for the overall integrity of research and the credibility of published findings. In the Journal of Infertility and Reproductive Biology, retractions for ethical misconduct, errors in methodology, fabrication of data, duplicate publication and undeclared conflicts of interest are noted. Here we review the underlying causes of retractions, the consequences for scientific transparency and integrity, as well as the refined process of peer reviewing and adherence to ethical principles in the study of reproduction. Retractions often arise from ethical violations like improper informed consent and violations of patient confidentiality. Methodological deficiencies also lead to articles' withdrawal, such as mistakes in study design, statistical misinterpretation or the failure to replicate findings. In science, the genuine production of high-quality work is rewarded through the publication process; data fabrication and manipulation are grave and harmful cases of scientific misconduct that disrupt scientific knowledge and mislead the research community often resulting in retraction when identified. Also, duplicative publications — publishing identical or overlapping data multiple times — artificially boost scholarly impact and compromise research integrity. Interesting article; they don't mention broad conflicts of interest, which must exist, as they do everywhere, which pollute all science. In order to preserve the honor of their work, authors must also clearly and discernibly report their funding sources and any affiliations. The high rate of retractions indicates a requirement for proper peer reviews, due diligence for editorial steps, and a strict adherence to ethical codes in reproductive biology work. This review identifies the need for ethical compliance, transparency, and reliable scientific methodologies to maintain the integrity of the literature in the field of reproductive science, through an analysis of retraction reasons in the Journal of Infertility and Reproductive Biology.

Keywords: Retraction, Reproductive Science, Ethical Violations, Scientific Misconduct, Data Integrity, Peer Review

Introduction

We are immersed in revolutionary advancements at the cutting edge of reproductive science with a worldwide impact (1). Yet keeping published research reliable is difficult because some yield later exposure of ethical breaches, methodological errors or misconduct (2). Retractions are a corrective mechanism to maintain the integrity of the scientific record, ensuring that it reflects findings that are accurate and reproducible (3). Knowing some of the common reasons why retractions occur can help inform the use of citations to improvement research practices and avoid future problems (4). There are notable reasons for retractions which a systematic review of research published in reproductive science has outlined along with their prevalence (5). The Table 1 outlines the common reasons for retraction in the field. The objective of this review is to illustrate the details of these retractions and the scope of impact on reproductive science, and to suggest potential developments to improve research integrity in the future.

Ethical Violations

Retractions in reproductive science are most often due to ethical concerns (6). One particularly egregious example is a study published in the journal Fertility and Sterility that rated the attractiveness of women who have endometriosis without their consent (7). It was retracted due to serious ethical concerns about the design of the study and potential harm to the participants.

Methodological flaws

Methods used in reproductive science can be quite intricate, involving clinical trials, and genetic analyses (8). Some retractions are the result of methodological flaws — for example, small sample sizes, improper analysis or confusion over what the findings mean (9). One retracted study, published in the Journal of Assisted Reproduction and Genetics (10), was retracted because the authors observed significant inconsistencies between what the trial was registered with and the data published, leading the editorial team to believe that there were significant concerns surrounding the validity of data.

Data fabrication and manipulation

A few studies are withdrawn, as a result of deliberate data manipulation, which is falsification and fabrication of findings (11). Clinical practices in reproductive medicine are based on research findings and, as such, fabricated data can have substantial implications on patient care and treatment protocols (12).

Duplicate and duplicate publication

Duplicate publication, meaning publishing the same

***Corresponding author:** Amin Tamadon, Department of Natural Sciences, West Kazakhstan Marat Ospanov Medical University, Aktobe, Kazakhstan; Email: amintamaddon@yahoo.com

results in more than one journal, is another frequent cause of retraction (13).

Reproductive BioMedicine Online retracted a paper on ovarian drilling for polycystic ovary syndrome because it had already appeared elsewhere (14). Such techniques create a protein inflationary spiral in the scientific literature.

Table 1. Common causes of retraction in reproductive science

Cause of retraction	Description	Example cases
Ethical Violations	Lack of informed consent, breaches of confidentiality	Study on fertility treatments conducted without patient consent
Methodological Flaws	Statistical errors, misinterpretation of data	Study with incorrect data analysis impacting IVF success rates
Data Fabrication/Manipulation	Altering or falsifying data to fit hypotheses	Retraction of a study on sperm motility due to fabricated results
Duplicate Publication	Republishing the same study in multiple journals	Identical studies on ovarian stimulation published twice
Undisclosed Conflicts of Interest	Failure to disclose funding sources or affiliations	Study on hormone therapy funded by an undisclosed pharmaceutical company

Common causes of retraction in reproductive science

Failure to disclose conflicts of interest

Scientific publishing should maintain transparency around sources of funding and potential conflicts of interest (15). The CRISPR Journal retracted a paper from a figure, whose involvement in controversial germline editing experiments had gone unreported (11). Not disclosing conflicts of interest damages research objectivity and findings credibility.

Summary of findings and recommendations

Data mining articles in the reproductive field that have required retraction, serve as a glaring reminder of the need for comprehensive compliance with established ethical standards, diligent peer review, and frank reporting. All journals should have robust screening processes, and researchers must comply with ethical standards to reduce scientific misconduct. Teaching early-career researchers about the responsible conduct of research may help to lower retractions, too.

Conclusion

Retractions in reproductive science serve as an essential mechanism for preserving the integrity of scientific literature. By understanding and addressing the underlying causes of retractions, the scientific community can work toward more reliable and ethical research practices. Strengthening peer review processes and promoting transparency in research can help prevent future retractions and maintain public trust in scientific findings.

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