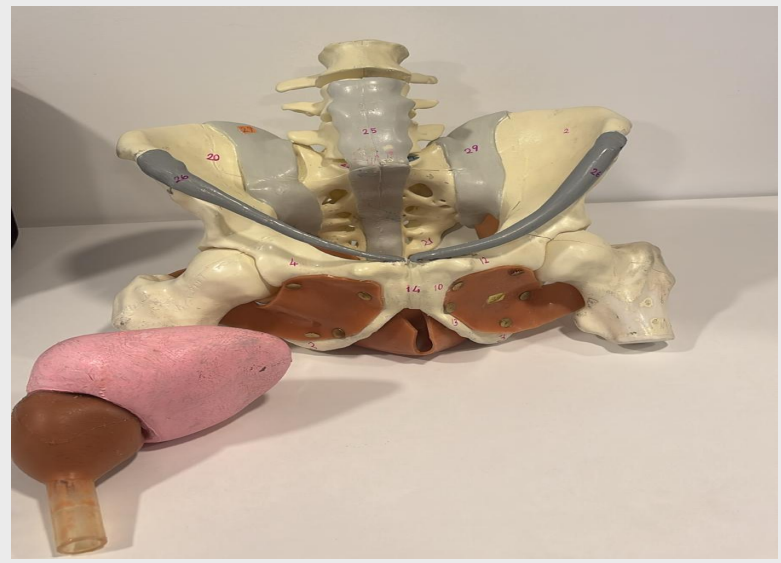


Effectiveness of Personalized
3D-Printed Pelvic Anatomical
Models in Medical Education for
Identifying Key Anatomical
Landmarks in Male Pelvic and
Perineal Surgeries: A Quantitative
Assessment

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Background

Understanding male pelvic anatomy is essential but challenging due to its complexity. Traditional models and textbooks often lack spatial depth and realism, limiting students' comprehension and surgeons' preparation.

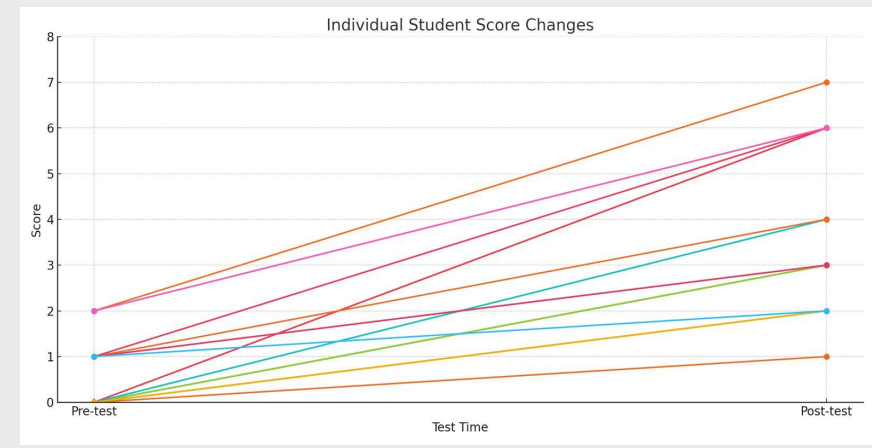


Methods

- Model created from patient imaging data.
- 37 anatomical structures included (osseous, ligamentous, muscular, visceral).
- Hands-on teaching sessions with undergraduate medical students.
- Knowledge tested pre- and post-intervention.

Results

- Significant improvement in anatomical test scores.
- High levels of student engagement and satisfaction.
- Model improved 3D comprehension of pelvic floor and neurovascular pathways.



Implications

This 3D-printed pelvic model enhances anatomy education by combining tactile realism with spatial accuracy. It bridges the gap between classroom learning and surgical practice, supporting both medical students and surgical trainees in developing clinically relevant anatomical skills.